Alternatives®
FOR THE HEALTH-CONSCIOUS INDIVIDUAL
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Dr. David G. Williams

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THE SAFEST ALTERNATIVES TO MENOPAUSE DRUGS

Estrogen replacement therapy (ERT) seems to have become the standard treatment protocol for postmenopausal women. Proponents of estrogen cite its ability to stop the number-one postmenopausal complaint—hot flashes. Additionally, they like to point out that estrogen can protect against osteoporosis and lower the harmful form of cholesterol (LDL) while raising the good form (HDL). But, there is more to the cholesterol story than most people are being told. Only a few years ago the edible oil industry and organized medicine were pushing "cholesterol-free polyunsaturated oil products." Although polyunsaturated fatty acids lower "bad" cholesterol, they also increase the risk of cancer. Once again, the whole truth isn't being told.

ESTROGEN USE INCREASES RISK FOR MORE THAN BREAST CANCER

Unfortunately, the popularity of estrogen may stem more from marketing techniques than from positive research. By associating its benefits with two of the most popular concerns of today, cholesterol and osteoporosis, its use is skyrocketing. **Currently, one out of every nine women in this country will develop breast cancer, and estrogen use only increases the risk.** It has also been linked to increased uterine cancer, gallbladder disease, excess blood clotting leading to stroke, heart attack or pulmonary emboli, depression, thyroid suppression, and elevated blood pressure. In addition, while estrogen does lower LDL cholesterol levels, there is no evidence that it lowers deaths caused by heart disease. In fact, numerous studies have shown that it *increases* the coagulability of the blood, which in turn increases risk of heart attack. *(Postgrad Med J 76;52:30) (N Engl J Med 74;290:15)* Another study showed that estrogen (in the form of birth control pills) greatly increased venous blood clotting. (Researchers now recommend stopping "the pill" at least four weeks prior to surgery to avoid these potential life-threatening complications.) Estrogen also increases cortisol production by the adrenal glands. Both cortisol and estrogen seem to age cells in the brain and central nervous system prematurely. *(Bull Exp Bio Med 89;108(7):1026-30)*

Before subjecting yourself to estrogen's potential dangers, take a hard look at natural alternatives. ERT has been in use for only a few years. Natural remedies have been utilized safely and effectively by thousands of people for centuries. What helps one woman, however, may not benefit another. The reasons for this will be clearer once you look at menopause as a natural progression of aging instead of a disease or hormonal malfunction.

MENOPAUSE IS *NOT* A DISEASE

At puberty, the female body begins a cycle of preparing for pregnancy, a process that continues for 35 to 40 years. It is regulated by an intricate

interplay of hormones. As menopause (*meno* meaning month and *pause* meaning cessation) approaches, the sex hormones that control the process, estrogen and progesterone, start to diminish and a woman's body begins to change. The breasts and genital organs begin to atrophy, bones and hair begin to thin, and lower levels of estrogen cause malfunctions in the body's temperature-regulating center (the hypothalamus) resulting in heart-pounding, sweat-drenching hot flashes. Some women breeze through menopause without difficulty. Others suffer enormous physical and psychological burdens.

Every woman has a unique hormone balance that can determine her reaction to menopausal changes. By taking advantage of some little-utilized physiological traits and by strengthening various components of the hormonal system, ill effects can be lessened. This is where the story gets a little more complicated.

What to Do When Estrogen Production Slows Down

Estrogen is a complex and powerful hormone produced mainly by the ovaries in response to hormonal "signals" it receives from the pituitary gland. Minute amounts can elicit profound changes throughout the body. Small amounts of estrogen are also produced by the adrenal glands. As ovaries quit producing estrogen, three areas need to be evaluated.

Thyroid Function

Like the ovaries, the thyroid is controlled by the pituitary gland. During menopause the ovaries need adequate hormonal stimulus from the pituitary. An underactive thyroid or iodine deficiency can increase the workload of the pituitary to the point that ovary stimulation is compromised. Iodine is essential for the thyroid gland's production of the hormone thyroxin, which regulates many functions, most importantly metabolism. An inadequate intake of iodine can result in inadequate levels of thyroxin, which in turn can result in fatigue; poor circulation to the extremities (resulting in cold hands and feet); obesity and inability to lose weight; irritability; low sex drive; headaches; low blood pressure; dry, thickening skin; cracking of the heels; nervousness; high cholesterol; irregular menstrual cycles; or mental confusion and difficulty in concentrating. All are classic symptoms of an underactive thyroid, or hypothyroidism.

Check Your Basal Metabolic Rate

If you have several of these symptoms, one of the first things you should do is check your basal metabolic rate to see if your thyroid is functioning properly. You can do this at home. Here's how:

1. Place a thermometer by your bed. Make sure it's been shaken down to at least 96 degrees.
2. When you wake up the next morning, before getting out of bed immediately place the thermometer in your armpit and leave it there for ten minutes. Just relax and remain still during the test.
3. Record the temperature.

"Normal" is considered to be between 97.2 and 98.2 degrees. If your temperature falls outside this range, it indicates a thyroid imbalance. For our purposes here, anything below 97.2 usually indicates a sluggish or hypothyroid condition. *Note:* Premenstrual and perimenopausal women can take their temperature any time. Women in their menstrual years get the most accurate reading on the second or third day after menstrual flow starts.

The most effective way I've seen to rebalance the thyroid gland is to take a liquid iodine product called Iosol (by TPCS Distributors). **Take four drops of Iosol in water each day for the first two weeks, then reduce the dosage to two drops per day.** (*Note:* Never ingest antiseptic or topical iodine. Iosol is the only form of iodine I recommend for internal use.) If Iosol does not seem to alleviate the symptoms of hypothyroidism, take three tablets of a glandular product called Thytrophin, along with just one drop of Iosol per day. You can often take Thytrophin in place of prescription thyroid medications. **Three tablets of Thytrophin are roughly equivalent to one grain of hormone.** *Note:* Complete details on thyroid evaluation and natural methods of correction are included in Dr. Williams' cassette tape program #6. Sources for recommended supplements are also included. (See Resources at the end of this report.)

Adrenal Function

Almost universally, women with menopause problems have both underactive thyroids and underactive adrenal glands. Sometimes nutritionally supporting the adrenal glands will be enough to eliminate menopausal symptoms. When the adrenals are functioning properly, they can produce estrogen. Unresolved stress and high intakes of caffeine and sugar are the most common causes of weakened adrenal glands. Every time you encounter a stressful situation, your adrenal glands react by producing a variety of hormones that place the body in a position to either fight or flee.

Diets high in sugar, alcohol, or caffeine or habitually skipping meals will eventually deplete the adrenal glands. Physical or mental stress will also take their toll. By supporting the adrenal glands nutritionally, cutting back on sweets, and eating smaller and more frequent meals, you can promote proper adrenal function. One of the quickest ways

to strengthen the adrenals glands is to supplement the diet with a good adrenal glandular. The best I've ever used is called Drenamin. **The normal recommended dosage for Drenamin is to chew one tablet, three times daily. However, I've found better results if you chew half a tablet six times a day on an empty stomach.** Improvement often will be seen in the first day or two; and as long as a proper diet is followed, the problem will be resolved within a month. Note: Information on evaluating and restoring adrenal gland function is available in *Alternatives*, Vol. 2, No. 1 and in the cassette tape program on Hypoglycemia #4. (See Resources)

Ovaries

The ovaries need the proper raw materials to produce hormones like estrogen:

We are often deficient in **unsaturated fatty acids** because of today's highly processed foods. Natural sources include whole grains such as wheat, rye, and oats. Unfortunately, unsaturated fatty acids degrade very quickly after being exposed to heat or air, so unless you personally grind the above grains immediately before eating, much of their benefit will be lost. Walnuts, pecans, hickory nuts, almonds, sunflower and pumpkin seeds are good sources. So is the avocado. I can already hear people complaining that these items are all fattening. They are somewhat high in calories due to their higher fat content. However, small amounts can supply the necessary unsaturated fatty acids. A small handful of nuts or half an avocado daily can do the trick. An even easier method of obtaining essential fatty acids would be to use one of my favorites—a daily tablespoon of flaxseed oil or 3–6 tablespoons of ground flaxseed. (See Resources.) If none of these sound appealing and you don't mind the added expense, encapsulated supplements are available in health food stores.

Vitamin E. Everytime I write about vitamin E and mention that one form or another seems to perform better in a clinical setting, I get letters from chemists and vitamin companies letting me know that all forms of vitamin E work about the same. However, for every one of these letters, I get no less than 20 letters from doctors and other readers describing their improved responses after following my suggestions. The debate over natural vs. synthetic nutrients will continue forever. With *Alternatives*, my purpose is to tell you what works. If the reports we receive from doctors, clinics, and research reports indicate that the synthetic version works best for a certain condition, I'll tell you. If research indicates a natural form, I'll tell you that too. If physicians are getting better results with a particular brand name I'll pass that along. **Thousands of women have gotten excellent results by adding 400–1,200 IU of d-alpha tocopherol to their diets.** In stubborn cases I have found that vitamin E products derived from wheat germ, such as Wheat Germ Oil Perles, may work better. They are rich in natural hormone precursors. Although they may be of very low potency, excellent results often occur from just 2–3 tablets daily. (See Resources section.)

Herbal Preparations

Various herbal preparations can increase female hormone production.

Dang Gui Su is a Chinese extract made from the plant *Angelica sinensis*. *Dong quai* Root is marketed in this country by Nature's Way. *Note:* Dang Gui and some of the other items I'll mention promote the production of estrogen. Their use may be contraindicated in instances where extra estrogen might add to a problem (e.g., breast cancer and uterine fibroid bleeding). Several doctors have reported successful treatment of menopausal symptoms using a combination of *Angelica sinensis* with the herbs **damiana** (*Turnera diffusa*) and **chaparral** (*Larrea divaricata*). Approximately two capsules of each herb daily have reportedly helped stop hot flashes and other symptoms. As problems subside the amounts taken can gradually be reduced and eventually stopped. (See Resources.)

Other herbs that have been found useful in supporting the ovaries during menopause include **licorice root**, **fennel**, **black cohosh**, and **unicorn root**. One company has combined each of these along with *Dong quai* in capsule form in a product called Femtrol. (See Resources section.)

Foods That Regulate Menopausal Symptoms

One new study has focused on the use of foods containing phytoestrogens to help regulate menopause. Phytoestrogens are chemical substances found in plants that can balance the body's natural estrogen levels. Even though phytoestrogens provide only weak estrogenic activity (about 1/400th the strength of estrogen) their effects can be amazing.

Incorporating **soy flour** and **linseed** or **linseed oil** (it's called flax oil in this country) into the diet could possibly replace the need for estrogen therapy. In Australia, researchers fed 23 menopausal women 10 percent of their calories in the form of phytoestrogen-containing foods like soy flour and linseed. Afterwards researchers evaluated the maturation of the women's vaginal cells (one reliable indication of estrogen activity). In only two weeks maturation had increased 40 percent! *(Brit Med J 90;301:905-6)* (See Resources.)

Another very rich source of phytoestrogens is **pomegranate seeds** (*Punica granatum*). They contain an estrogen-like compound practically identical to natural estrogen. *(Dtsch Apoth Ztg 77;117(41):1672-9)* I don't know of any commercial source for the seeds or what a trial dosage would be. However, if you've ever eaten a pomegranate you know that finding enough seeds shouldn't be a problem.

Green leaves from the wild carrot plant (*Daucus carota*, also commonly referred to as Queen Anne's lace), are rich in porphyrins. These chemicals stimulate the release of gonadotropic hormones by the pituitary gland, which in turn trigger the release of extra estrogen by the ovaries. (See Resources.)

One last product comes to mind for menopause problems. **Simplex F** contains non-hormonal extracts from the bovine pituitary, thyroid, adrenal, and ovary glands. It exerts a balancing effect on the named organs. (See Resources.)

None of these products are an exact replacement for hormones (pomegranate seeds may be close). Their main function is to increase and balance hormone production, not replace it, so they function best when the ovaries are still present. In cases where the ovaries have been removed, actual hormone replacement therapy may be the only alternative.

Dr. David Williams

Resources

- **Iosol.** TCPS Distributors sells only to doctors, but Iosol can often be found in larger health food stores or ordered from Sullivan Creek Distributing, 888-406-4066.
- **Thytrophin**, **Drenamin**, **Wheat Germ Oil Perles**, and **Simplex F** are made by Standard Process, Inc. Unfortunately, this company sells only to medical professionals. Call them at 800-558-8740 to get the name of a physician who can order products for you. Sometimes they can be ordered from a distributor, such as For Your Health at 800-456-4325, or be found at The Vitamin Shoppe (800-223-1216).
- **Dr. Williams' cassette tapes** are available for $8.99 + $3.99 shipping from Mountain Home Nutritionals at 800-718-8293.
- **Flaxseed** and **flax oil** are available in health food stores. They can also be ordered from Walnut Acres at 866-492-5688.
- **Dang Gui Su**, made by Lanchow Chinese Medicine Works (Lanchow, China) can be found in Chinese herbal stores in larger cities. *Dong quai* Root is marketed by Nature's Way and is available in health food stores.
- **Licorice root**, **fennel**, **black cohosh**, and **unicorn root**. One company has combined these with *Dong quai* in capsule form in a product called **Femtrol**, marketed by Enzymatic Therapy (Contact them at 800-783-2286 for the location of a supplier in your area.) Their products are also sold by The Vitamin Shoppe at 800-223-1216.
- Soy flour can be found in health food stores.
- Queen Anne's lace is available by the pound from Penn Herb Co. at 800-523-9971.

Recap of Nutrients Recommended in This Report

DO NOT TAKE THESE DOSAGES WITHOUT FIRST READING THIS REPORT.

All dosages are daily, unless otherwise indicated.

Iosol	4 drops in water daily for the first two weeks; then reduce dosage to 2 drops daily
Flaxseed oil	2 tablespoons or 3–6 tablespoons of ground flaxseed
Vitamin E	400–1,200 IU of d-alpha tocopherol

Note: Nutrients without specific dosages are not listed. Follow instructions on product labels.

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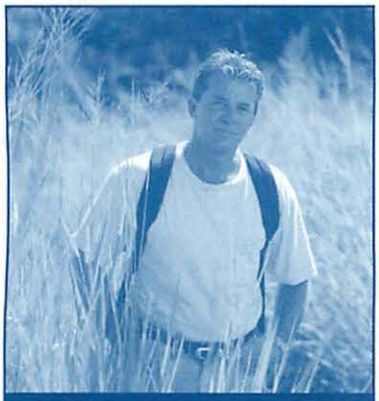
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Complete And Total Reversal of Osteoporosis

Osteoporosis has become a 21st Century epidemic. Between 25 and 30 percent of all people in nursing homes are there because of hip fractures, and fractures from osteoporosis result in more deaths among women than ovarian and breast cancer combined. One study revealed that osteoporosis in women as young as 40 can cause intense bone pain, muscle weakness, and difficulty in walking. (*Br Med J 96;312:570-572*)

Conventional medicine's approach to treating osteoporosis has been calcium and estrogen replacement therapy (ERT). But if you're taking estrogen in an effort to treat osteoporosis, it may be the equivalent of burning down the barn to get rid of the mice. Let me explain.

I've written many times in the past on how a greater lifetime exposure to estrogen increases the risk of cancer, particularly breast cancer; but this information has been largely overshadowed by the fact that estrogen increases the absorption of calcium, which increases bone mass. Estrogen levels are so closely linked to bone mass that researchers now tell us that they can predict a woman's cumulative lifetime exposure to estrogen simply by measuring her bone mass. The higher the bone mass, the more exposure to estrogen—and the greater the estrogen exposure, the greater the risk of developing breast cancer.

New Hope for Osteoporosis Sufferers

Surprisingly, with hormones like estrogen constantly in the headlines these days, one very important hormone, progesterone, doesn't receive much publicity. It should. Balancing progesterone levels is often the key to correcting a wide variety of common complaints.

I need to make it very clear that I'm talking about *natural* progesterone, not progestins. Progestins are chemically altered or synthetic forms of progesterone linked to a long list of side effects. Used during pregnancy, they can cause abnormal formation of sexual organs in the fetus. In addition, progestins can cause abnormal menstrual flow or cessation, fluid retention, nausea, insomnia, jaundice, mental depression, fever, masculine characteristics in females, weight fluctuations, and allergic reactions. With natural progesterone, however, side effects are extremely rare. In fact, we've only been able to find two minor problems related to its use: a feeling of euphoria (at higher dosages) or a slight altering in the timing of menstrual cycles.

An Important Finding: Benefits From Natural Progesterone Cream

Dr. John Lee of Sebastapol, California has found that by **adding natural progesterone cream to an established osteoporosis program, bone density can be increased up to ten percent within the first six months, then increased annually at the rate of three to five percent, until stabilizing at levels common to a healthy 35-year-old.** *(Lancet 90;336 (8726):1327) (Inter Clin Nutr Rev 90;10 (3):385-91)*

Dr. Lee's study lasted three years and involved 100 postmenopausal patients ages 38 to 83. The majority had already lost height

from the disease, some as much as five inches. Patients on estrogen took 0.3 to 0.625 mg of conjugated estrogen daily for three weeks each month and applied a cream containing three-percent natural progesterone at bedtime for 12 days a month. (Those using estrogen were asked to apply the cream during the last two weeks of the month.) All were told to use ½ to ⅓ of a one-ounce jar each month.

Bone density tests were performed and the results were nothing short of spectacular. Two of the findings were that neither age nor time from menopause seemed to influence the restoration of bone. In fact, those patients that began the study with the lowest bone densities had the fastest increases. All except three began to show improvement in the first six months. Of these three, one needed hydrochloric acid digestive supplements, another had been taking three times the amount of thyroid supplement she should have, and the third had recently lost her husband to cancer and had not been following the program as prescribed. After each of these conditions were corrected, all three showed immediate improvement. What's more, the incidence of pathological fractures dropped to zero among these women. Their height stabilized, they experienced more energy, more joint mobility, and less aches and pains. Many reported that their sex drive returned to normal. Best of all, no side effects were reported.

Some of the women in Dr. Lee's study were taking estrogen hormones. The only positive effects from estrogen seemed to be relieving hot flashes and stimulating lubrication of the vagina. (They were not using additional progesterone to correct hot flashes. It has also been suggested that these women could apply progesterone cream to the vaginal area to increase lubrication there. If both these techniques worked, it's possible estrogen wouldn't be needed at all.)

There are a number of progesterone creams on the market, under a variety of names. Make sure that the one you use contains three-percent natural progesterone—the dosage used in Dr. Lee's studies. One such cream is FemGest, available from Bio-Nutritional Formulas, Inc. 800-950-8484. You may also find it in health food stores.

The Rest of the Program

- **Diet:** A diet rich in green vegetables and low-fat cheese was emphasized. Red meat was limited to three times a week. All sodas were eliminated (their high phosphorus content interferes with calcium absorption). Alcohol consumption was minimized and smoking was forbidden.
- **Exercise:** 20 minutes daily or ½ hour three times a week. Bone grows in relation to the stress (exercise) that is placed upon it. Proper bone growth requires exercise.
- **Supplementation:** Calcium: 800–1,000 mg, Vitamin D: 350–400 IU (I recommend 800 IU), Vitamin C: 2,000 mg in divided dosages, Beta-carotene: 15 mg

How Acid/Alkaline Balance Fits Into the Picture

Proper pH balance (pH measures the acidity or alkalinity of a substance) is essential for good health. Many people don't know that pH is a subtle measurement of the body's electrical balance, which regulates many bodily functions. The pH scale runs from 0 to 14, with 0 being the most acidic, 14 being the most alkaline, and 7 being neutral. To survive, our bodies must maintain pH very close to 7.4, which is just on the alkaline side of neutral. If the pH varies too much from the ideal, it becomes difficult for various enzymes to function properly.

Maintaining this slightly alkaline state is a constant challenge, primarily because of the acid-forming functions that take place within the body and the overabundance of acid-producing foods we consume. The idea that various foods influence the pH of the body isn't new. In fact, as far back as the early 1900s, doctors began studying the pH-altering effects of different foods. They found that while a few foods were "neutral" in their effects, most were either alkaline- or acid-producing. They also found that simply changing the diet could change body pH. Bringing body pH closer to the normal range rid patients of many of their health complaints. For some reason, however, the idea of adjusting the diet to influence the body's pH fell out of favor rather quickly. I don't think most people understood just how critical proper pH is to health.

When you look at most of the studies on osteoporosis, it appears that most scientists and medical professionals can't explain what's going on. While they realize that risk factors such as calcium deficiency, too much meat protein, smoking, menopause, and a lack of exercise play a role, they also realize that all of these factors account for less than half of all hip fractures. Only a handful of researchers realize the true role an acidic pH can have on living bone.

Bones—The Alkaline Storehouse

Earlier I mentioned that the ideal pH is close to 7.4. Your body has to constantly work to neutralize or rid itself of acid byproducts to maintain this level. Organs such as the liver and pancreas produce and release alkaline enzymes to reduce excess acidity. Patches of lymphatic tissue in your small intestines called Peyer's patches produce large amounts of the alkalizing enzyme called chyle. But even with all the alkalizing compounds your body produces, it is impossible to neutralize every bit of the acid it ingests or produces. To help maintain the proper pH, acids need to be eliminated from your body.

Your blood is one of the primary means for the removal of acidic waste products. It carries carbonic acid from metabolized food to your lungs where it is eliminated as carbon dioxide and water. Blood also is constantly circulated through the kidneys, where acids are removed and excreted in the urine. Acidic wastes are also released by sweat glands and through feces from the large intestine.

Even with these mechanisms at work, there are times when the body becomes too acidic and pH drops below the required 7.4. This is crucial because when pH drops to just 7.38, the body begins to break down bone and muscle tissues to use their alkalizing ammonia, carbonates, and phosphates.

From man's beginning, in addition to supporting the body, bones have served as the storage facility for acid-neutralizing minerals. Earlier in history, our ancestors might have become over-acidic for temporary periods when meat was available, during periods of starvation, or when vegetables were in short supply. At such times, alkalizing minerals from their bones would be removed, but within a short period of time they would return to a more vegetable/fruit-based diet and the bone minerals would be replaced. Today this doesn't occur.

Anthony Sebastian and Deborah Sellmeyer with the University of California in San Francisco reviewed more than 85 different studies and evaluated typical diets in 33 countries. They discovered a direct relationship between diets high in animal protein, such as fish, meat, and cheese, and the incidence of hip fractures. Germany and Sweden, with the highest consumption of these foods, had 40 times the rate of hip fractures than Thailand did. While Thais consume enormous amounts of acid-producing rice dishes, they also eat far more fruits and vegetables, one-third as much meat, and practically no cheese. *(J Gerontol A Biol Sci Med Sci 00;55(10):M585-92)*

A follow-up study by the same researchers found that women eating a high acid-producing diet had more rapid bone loss and a 3.7-times greater risk of hip fracture than women eating fewer acid-producing foods. *(Am J Clin Nutr 01;74(3):411-2)*

Why Bones Hate Cheeseburgers

A top researcher in this area, Thomas Remer of the Research Institute of Child Nutrition in Dortmund, Germany, has been analyzing foods to see the amount of acid each produces in the body. While many acid/alkaline charts from the early 1900s are fairly accurate, we've learned a great deal more from Remer's work. For example, we now know why milk is pretty much neutral as far as acid or alkaline production is concerned, but cheese is strongly acid-forming.

Milk contains roughly equal parts acid- and alkaline-producing compounds. In the production of cheese, however, the liquid, alkaline-producing portion is removed. (The protein-rich liquid, whey, is healthy and pretty much neutral.) It appears that the more sharp or crumbly the cheese, the more acid-producing it is. Parmesan cheese is the most acid-forming of the cheeses tested.

Another interesting finding from the folks in California was that not all proteins have the same acid-forming effect. Animal proteins seem to be strongly acid-forming, whereas vegetable proteins seem to contain alkaline compounds that neutralize any acidic effects. *(Am J Clin Nutr 01;73(1):118-22)* This also helps explain why some studies have shown that high-protein diets cause bone loss, while other studies show just the opposite.

Bodybuilders routinely follow high protein diets in an effort to build lean muscle. To increase their protein intake, they often resort to protein powders, which are increasingly being produced from whey, a byproduct of cheese production, as I mentioned earlier. When Remer compared the protein intake to the acid production in bodybuilders, he found little, if any, increased acid load. *(Z Ernahrungswiss 95;34(1):10-5)* This is probably due to the source of the protein and the fact that serious bodybuilders include lots of fruits and vegetables in their diet.

It would be interesting to see a study of acid-formation and subsequent bone loss among individuals who follow a high-protein diet such as that advocated by Dr. Richard Atkins. Based on the research I've seen, following such a program would probably result in major bone loss. For various reasons, I've never been a supporter of high-protein diets, and after reviewing the above research, I'm even less of a fan.

This research isn't widely known in conventional circles, and I suspect it will be years before you hear much, if anything, about it. There's a major effort underway by pharmaceutical companies to promote a generation of drugs to treat osteoporosis (such as bisphosphonates) or to promote hormone replacement therapy, estrogen, and the hormone calcitonin. Keep in mind that these drugs have adverse side effects and have been shown to be only marginally effective. The real problem is that they interfere with a normal physiological process. A certain amount of resorption (dissolving of old bone by the body) is normal, and is followed by the growth of new bone. Long-term use of these drugs prevents the loss of old bone, but prevents the building of new, and the bones eventually become brittle.

Obviously, such drugs aren't the answer. I can assure you that the new epidemic of osteoporosis we're now experiencing isn't from a drug deficiency. In addition to factors such as vitamin D deficiencies and lack of exercise, our acid-forming diet is to blame.

To Remedy Acidity, Try $KHCO_3$

Before dialysis was available back in the mid 1900s, two side effects associated with kidney failure were a bloated stomach caused by acid buildup, and rapidly weakening bones. When doctors began giving patients bicarbonate of soda (baking soda) to relieve their bloated stomachs, a funny thing happened: Their bones began to remineralize and get stronger. This is an obvious example of how an over-acidic condition weakens bones by causing the body to pull out alkalizing minerals. Baking soda is an alkaline compound that neutralizes acid. Even today, dialysis patients are given alkalizing agents during dialysis to help prevent the acidic breakdown of bones and muscles.

In a short study by Anthony Sebastian (mentioned on page 3), it was demonstrated that post-menopausal women could reduce bone loss simply by adding potassium bicarbonate ($KHCO_3$) to help neutralize acids in their diet. Small amounts were given daily to 18 postmenopausal women, ages 51 to 77 years, for just two-and-a-half weeks. The results were nothing short of amazing. When compared to a control group, those taking the potassium bicarbonate had an improved calcium and phosphorus balance, a reduction in bone resorption, and an increase in the rate of bone formation. In laymen's terms, these women had 27 percent less calcium in their urine, and this along with the other findings was evidence that less bone was being broken down to balance the acid in their diets. (*N Engl J Med 94;330(25):1776-81*)

To put this study in better perspective, the women taking the potassium bicarbonate were losing 55 mg less calcium each day than those not taking it. This may not seem like much of a savings, but over a twenty-year period that adds up to about a pound—the amount of calcium in one of your legs. The potassium bicarbonate also had a sparing effect on the breakdown of muscle tissue.

Other studies using potassium bicarbonate have produced similar results. (*Kidney Int 89;35:688-695*) (*Israel J Med Sci 71;7:499*) Some studies suggest that substituting sodium bicarbonate for sodium chloride (table salt) in the diet may also have a bone-sparing effect. One study showed positive benefits from just under five grams of sodium bicarbonate a day. (*Am J Clin Nutr 84;39:281-288*)

At this point, not many medical professionals are advocating the regular daily use of potassium bicarbonate or sodium bicarbonate, and I'm not, either. The research team at the University of California, however, is currently preparing to do a five-year study evaluating daily use of potassium bicarbonate and its effects on bone loss.

I suspect it probably will be effective. However, I have some reservations about its daily use if taken at mealtime, since it could interfere with the digestion of foods that require stomach acid. That problem can be easily overcome by taking it at bedtime, between meals, or in enteric-coated capsules. Even so, treating an overly acidic diet with potassium or sodium bicarbonate is addressing a symptom and not the underlying problem. That kind of "solution" usually causes other problems later on.

Dietary Ways to Achieve Balance

Through the years, there have been diet plans, formulas, charts, etc. that have attempted to outline exactly what foods in what amounts need to be eaten to achieve this balance. Unfortunately, most are so confusing they only make the problem seem too difficult to overcome. In reality, the solution is quite simple. If you were to look at history or at societies where osteoporosis is not such a big problem, you would find that 75 to 80 percent of the diet consists of alkaline-producing foods. These findings translate to some pretty straightforward dietary advice:

Breakfast, lunch, or dinner should consist of 75 to 80 percent alkalizing foods and a maximum 20 to 25 percent acidic foods. Most people will need to eat a few vegetable-only meals each week to make up for excess acid-forming foods. And some might prefer to eat vegetables, fruits, or other alkaline-producing foods exclusively for three-quarters of their meals. A good protein powder shake for breakfast is also a great idea. Visit the Health Library section of my Web site, **drdavidwilliams.com**. Here you can find the recipe for this delicious protein drink, as well as other nutritious recipes.

Is Your Body Too Acidic?

Another complaint associated with acidosis stems from poor oxygen utilization. One of the primary waste products produced by all the living cells in your body is carbon dioxide. Bicarbonates, or alkaline compounds, are required in the cellular exchange of oxygen and carbon dioxide. Without adequate supplies of bicarbonates, carbon dioxide accumulates within the tissues. In simple terms, you suffocate.

Due to the excess carbon dioxide and lack of oxygen, overly acidic individuals tend to sigh a lot and experience breathlessness. The slightest amount of exertion leaves them panting and can lead to muscle pain and cramping. Frequently, they suffer from insomnia. Many complain of a constant "lump" in the throat (which comes from dehydration and the associated loss of sodium). I've also found that when people are very acidic, their tissue levels of oxygen are so low that they have difficulty holding their breath for more

Continued on page 6

The Who's Who of the pH Crew

Over-acidity comes from consuming too many acid-forming foods and not consuming the alkalizing foods to counteract them. Here's a brief list of the most acid-forming foods.

After looking at this list, a lot of you might feel that you probably eat enough variety to balance things out. But usually that's not the case. If you can honestly say that 75 to 80 percent of every meal comes from the alkaline foods list, then you're doing okay. If that's not the case, I would suggest making some changes in your diet.

One way to speed the process up dramatically is through juicing. Making and consuming fresh vegetable juices on a daily basis will jumpstart the process of alkalizing your body. That's why so many people feel so good after they begin a juicing program. (Due to the problems associated with blood sugar, I recommend using only vegetable juices and not fruit juices. Eating whole fruit affects blood sugar less because the fiber in fruit slows the body's processing of fructose.)

Note: Just because a food is acid-forming doesn't necessarily make it unhealthy, and I'm not saying that you should avoid all of them. In fact, many acid foods are necessary for optimum health. It's just a matter of balance. Fixing your acid/alkaline balance isn't the complete answer to perfect health; it's only one piece of the puzzle. The bottom line is that we need to be eating enough alkalizing foods to help our bodies neutralize the acid-forming foods.

Acid-forming Foods

- All meat (beef, pork, lamb, chicken) and fish
- Rice (white, brown, or basmati)
- Cornmeal, oats, rye, spelt, wheat, bran
- Popcorn
- Pastas
- Breads and most other grain products like cereals (hot or cold), crackers, pastries
- The following beans (unless sprouted, in which case they become alkaline-producing): pinto, navy, mung, lentils, black, garbanzo, red, white, adzuki, and broad
- Cheese (Parmesan and sharper cheeses are the most acid-forming)
- Sunflower and pumpkin seeds
- Wheat germ
- The following nuts: walnuts, pecans, cashews, dried coconut (fresh coconut is alkaline-producing), pistachios, macadamias, filberts, Brazil nuts, and peanuts
- Colas
- Alcoholic drinks
- Coffee and other caffeinated drinks
- Sweetened yogurt
- Most forms of sweeteners (artificial sweeteners, cane sugar, beet sugar, barley syrup, processed honey, maple syrup, molasses, fructose, lactose)
- Refined table salt
- Soy sauce
- Mustard (dried powder and processed)
- Ketchup (unless natural and homemade)
- Mayonnaise (unless natural and homemade)
- White Vinegar (apple cider and sweet brown rice vinegar are less acid-producing and preferred)
- Nutmeg
- Tobacco
- Practically all drugs

Alkalizing Foods

- Practically all vegetables
- Practically all fruits, except blueberries, plums, prunes, and cranberries. Even citrus fruits such as lemons, which we think of as being acidic, are alkaline-producing in the body. They are rich in organic salts, like citrates, which are converted into bicarbonates.
- Beans such as string, soy, lima, green, and snap
- Peas
- Potatoes
- Arrowroot flour
- Grains such as flax, millet, quinoa, and amaranth
- Nuts like almonds, pignoli, fresh coconut, and chestnuts
- Sprouted seeds of alfalfa, radish, and chia
- Unsprouted sesame
- Fresh unsalted butter
- Milk, cream, and goat's milk
- Eggs
- Whey
- Plain yogurt
- Sweeteners like raw, unpasteurized honey, dried sugar cane juice (Sucanat), brown rice syrup
- Fruit juices
- All vegetable juices
- Most herbal teas
- Garlic
- Cayenne pepper
- Gelatin
- Most all herbs
- Miso
- Most vegetable and unprocessed sea salt
- Most spices
- Vanilla extract
- Brewer's yeast
- Most unprocessed, cold-pressed oils are neutral or alkaline-forming (even margarine seems to be neutral, but I don't recommend this "liquid plastic")

Continued from page 4

than 20 seconds. These symptoms are a fairly good indication that you're too acidic.

If you can't tell if you're too acidic by what I've written so far, there's a simple and fairly accurate way to test yourself. Saliva closely parallels the blood when it comes to pH. Blood pH is normally 7.4 and the normal saliva pH should be between 6.5 and 7.0. You can check your saliva pH using pH Hydrion test strips or paper (available from Simply Hydroponics at 727-531-5355 or *www.simplyhydroponics.com/hydrion_strips.htm*).

If your saliva pH consistently falls below 6.5, you have an acidosis problem. If it consistently reads above 7.0, you could be too alkaline. In the past, some have recommended testing urine to evaluate the body's overall pH. I think there are too many variables that influence the pH of the urine, which makes it unreliable for this purpose.

To Find the Solution, You Need to Understand the Problem

Thomas Remer (mentioned earlier) has found that even though **individuals living in countries like South Africa and Singapore consume less than one-third the recommended amount of calcium, they have fewer hip fractures than their Western counterparts.** The reason is that they eat a low-acid-producing diet. All the calcium in the world won't rebuild bones if it's accompanied by an acid-producing diet.

Besides diet, other recent lifestyle changes have contributed to this problem of widespread acidosis, including the selection and improper digestion of fat. When fats aren't oxidized and metabolized, you lose their alkalizing properties.

How Bile Affects Digestion

Fats are one of the more difficult things for your body to digest, and fat digestion is a fairly complex event. At the risk of oversimplifying the matter, I'll say that one of the primary components necessary to digest fats is bile. Bile consists of alkaline bile salts, bilirubin, cholesterol, fatty acids, lecithin, vitamins, and minerals. It is produced in the liver and passes into the gallbladder where water and minerals are reabsorbed into the body, making the bile more concentrated. The gallbladder releases this concentrated bile when fat moves into your small intestine. Bile salts act much like soap, helping emulsify or break down fats into smaller particles for absorption into the bloodstream.

After the liver removes poisons, drugs, excess sex hormones, toxins, heavy metals, etc., from the body, it gets rid of them by dumping them in bile. After aiding in the digestion of fats, the bile is reabsorbed from the small intestine, while toxins and other poisons continue through the intestinal tract, exiting the body in the stool.

Excess Alkalinity Is No Picnic, Either

Switching to a more alkaline diet will benefit almost everyone, though there is a small percentage of the population that is actually too alkaline. The few who have this condition usually suffer from calcium deposits. Calcium precipitates when the surrounding environment is alkaline. This results in migrating nerve and joint pain, insomnia, and early morning stiffness. People wake up stiff, but the stiffness improves pretty quickly as they become more active. Their muscle activity produces lactic acid, which helps neutralize the buildup of alkaline compounds and bring the body's pH back into balance. I suspect that 50 years ago alkalosis was more of a problem than it is today. The way our diets and lifestyles have changed, the opposite problem, acidosis, has now become almost universal.

For years I've equated the removal of gallbladders without informing the patients about the need for digestive bile salts with malpractice. If you've had your gallbladder removed, you should be taking bile salts with every meal for the rest of your life. Without your gallbladder, your body's ability to store and concentrate bile becomes impaired. This interferes with fat digestion and the proper maintenance of cholesterol. Gallbladder patients who fail to use bile-salt supplements will progressively begin to experience all the symptoms of essential fatty acid deficiencies (skin problems, cataracts, heart disease, etc.).

Also keep in mind that hormones from your thyroid gland are associated with fat metabolism. An underactive thyroid gland increases cholesterol and fat levels in the blood. Anyone who benefits from the use of bile salts should also be tested for an underactive thyroid. In the April 2000 issue of *Alternatives*, I outlined a simple, yet effective method to evaluate your thyroid gland, and how to correct the problem using natural methods. (To order back issues, call 800-718-8293.)

How to Get Supplemental Bile Salts

There are several bile salt products on the market. I personally take and recommend the product called Cholacol from Standard Process. It contains a proprietary blend of collinsonia (root) and purified bovine bile salts. I've had consistent and excellent results using this product for the last 20 or so years. I generally recommend taking two tablets immediately before a meal. (Unfortunately, only health care professionals can purchase Cholacol from Standard Process, Inc. However, Standard

Process Products are available to consumers at *www.costlesssupplements.com;* 800-578-5939).

PHOSPHORUS

When it comes to your health, there's one mineral you hear very little about, even though it is the second-most abundant mineral in your body and is necessary for practically every chemical reaction that takes place. That mineral is phosphorus. As important as phosphorus is to good health, however, an excess of it in your system can lead to serious problems.

It has only been in the last few years that Department of Agriculture food surveys have shown our phosphorus intake to be above normal. From 1989 through 1991, the Department performed a survey to determine dietary calcium and phosphorus levels in the U.S. population. The survey involved over 12,000 people from 48 states and Washington, DC. Results: Only children under 11 years of age were found to be getting the 1989 Recommended Dietary Allowances (RDAs) set for calcium. Adolescent girls were getting only 56 percent of the RDA for calcium, and young women only 48 percent. Adults over the age of 60 were often getting less than half the RDA for calcium. Phosphorus levels, on the other hand, were at or above the RDA for all age and sex groups except for girls and young women under the age of 25.

More than 45 different phosphorus-containing food additives, which are not accounted for in these surveys, are now added to foods as preservatives of color and moisture, and as emulsifiers and sequestrates. Five different phosphate-containing food starches have been approved for use in ready-to-eat frozen foods and desserts. Phosphorus additives are widely used in frozen pizzas, chicken, and fish. Additionally, over 70 phosphorus compounds are in use as indirect additives in packaging materials, sanitizers, and production acids.

Additional phosphorus comes from hard water sources and soft drinks, neither of which is accounted for in these food surveys. A 12-ounce soft drink contains around 50 mg of phosphorus, and the average annual consumption of soft drinks in this country now exceeds 50 gallons per person. Soft drink consumption surpassed water consumption in the early 1980s. As strange as it may sound, the average person in this country consumes over 50 gallons of soft drinks a year, but only 40 gallons of water.

Unlike calcium, which is difficult to absorb, roughly 70 percent of all dietary phosphorus is readily absorbed and directly transported into the bloodstream. Also, unlike calcium, your body has very little control over how much phosphorus is absorbed. Certain minerals such as iron and magnesium can interfere with phosphorus absorption, but only when large amounts are taken. High fat diets increase the absorption of phosphorus.

High phosphorus diets, especially when you're low in calcium, will lead to osteoporosis. When you consider how the phosphorus content in our diet has increased during the last couple of decades, it shouldn't be much of a surprise to learn that this disease is becoming more and more common. The surprise comes when you look a little deeper. Less obvious problems that are linked to high phosphorus/low calcium diets are: muscle cramps, mini-strokes, periodontal disease and tooth loss, high blood pressure, and osteomalacia, a softening of the bones. It is usually accompanied by aching bone pains (often referred to as rheumatism), chronic hoarseness, Parkinson's Disease, and soft tissue calcification (kidney stones and atherosclerosis).

These problems can be easily treated by readjusting your phosphorus/calcium levels and improving parathyroid function. The long-term benefits of improving your phosphorus/calcium levels, such as arthritis and osteoporosis prevention, can be enormous. However, it may be the short-term effects, like preventing a stroke, that actually save your life.

LOWER YOUR PHOSPHORUS INTAKE

Increasing your calcium intake, (see below) is probably the easiest thing you can do. Unfortunately, increasing calcium will not eliminate all of the undesirable effects of too much phosphorus, and decreasing the amount of phosphorus in your food may be one of the more difficult tasks. Phosphorus is plentiful in food.

The first order of business is to cut back or eliminate soft drinks from your diet. Next, you should try to integrate a wider variety of fresh foods into your diet. The typical meat and potato diet is high in phosphorus. In addition, eat fewer prepared foods. Processed and frozen food dishes are loaded with phosphorus and phosphate additives; but currently, phosphorus and phosphate levels are not listed on food labels, so it's hard to know exactly what and how much of these additives are actually used in a given product.

CALCIUM

With all the hoopla and media attention, you may think enough has been said about calcium. Unfortunately, what you've heard or read may be misleading or even incorrect.

Certain nutrients like calcium, iron, and protein require high hydrochloric acid (HCl) levels in the stomach to be properly digested. Sadly, with age HCl production in the body declines dramatically. In fact, by age 50, the stomach releases only 15 percent of that amount of acid it released at age 25. Even more alarming, 35 percent of all people over 65 don't pro-

duce any hydrochloric acid at all! This one fact alone explains why calcium deficiencies are commonly linked with health problems in older patients, such as high blood pressure, arthritis, heart palpitations, tremors, osteoporosis, insomnia, leg cramps, osteomalacia, excessive nervousness and irritability.

Unfortunately, many well-meaning doctors are still recommending calcium supplements that even further reduce stomach acids. And antacids for calcium may decrease your ability to absorb iron (leading to anemia) and protein, and trigger an acid-rebound effect that can lead to indigestion and even ulcers.

Phosphorus Leaches Calcium From Your Bones

I've discussed some of the dangers of ingesting excessive phosphorus. Another danger affects calcium levels. **Phosphorus acts on the parathyroid glands. These glands secrete the parathyroid hormone (PTH), which regulates calcium levels in blood and tissues. When calcium levels are low, the parathyroid glands produce PTH, which raises calcium levels by leaching it from bones.**

(As a side note, estrogen makes bone less sensitive to the parathyroid hormone and can help stop the removal of calcium. This helps explain why osteoporosis occurs less in premenopausal women and those taking estrogen.)

New research indicates that simply adjusting the time of calcium intake may be a key to preventing osteoporosis. The production and release of PTH is linked to your circadian rhythm (your 24-hour biological clock). PTH levels, and subsequently the amount of calcium being taken from your bones, increases during the night. Researchers at Northern General Hospital in Sheffield, England evaluated the effect of taking calcium supplements at different times of the day. They've now informed me that when premenopausal women took 1,000 mg of calcium at 11 p.m., the calcium reversed the nighttime increase in PTH activity and eliminated the increase in bone loss that normally would occur.

Why You Need to Supplement Calcium

Your body's storage of calcium is in a constant state of transformation, or "bone remodeling." Bones act as a storehouse for calcium reserves. Roughly 99 percent of the total calcium in your body is in your bones and teeth; the other one percent is in body fluids and soft tissue. As you've seen, calcium is drawn from the bones when it's needed to maintain blood and tissue levels. When there is an excess of calcium, it is redeposited in the bones. Research has shown that under normal circumstances the calcium in your bones is completely removed and *replaced* about every ten years.

Dietary surveys have now revealed that **calcium bone levels are being depleted because calcium levels in food are not sufficient to reverse the trend and phosphorus levels in foods are increasing.** Currently, only children below the age of 11 are getting enough calcium in their diets to replace what is lost during bone remodeling. As we reach adolescence and early adulthood, we begin to lose more calcium than we can replace from diet alone. And the problem gets worse with age. Calcium becomes harder to assimilate due to a lack of digestive acids. Less exposure to the sun results in lower body levels of vitamin D, which is essential for strong bones and proper calcium use.

Women in their 30s and 40s and those on estrogen replacement therapy should get at least 1,000 mg of calcium a day. Postmenopausal women not on estrogen should get 1,500 mg daily. Most men should get 1,000–1,200 mg daily. *Note:* While too much calcium generally isn't a problem, daily intakes of 2,000 mg or more may cause the parathyroid glands to increase hormone secretion in an effort to lower calcium levels.

How to Get Adequate Calcium Intake

While you most likely need a supplement to meet your overall calcium needs, there are certain calcium-rich foods I highly recommend. Fermented milk products provide calcium along with lactic acid to enhance the digestive process. They also provide beneficial bacterial flora for the lower bowel. Include yogurt, kefir, buttermilk, acidophilus milk and cheeses to your diet. If you suffer from lactose intolerance, most of these items are now available with the enzyme lactase.

There are hundreds of calcium products on the market. **In selecting a calcium supplement, look for one that contains the digestive acid betaine hydrochloride, additional magnesium, and vitamin D.** Each of these will help increase the amount of calcium you assimilate into your system. One such product is Tri-Boron Plus from TwinLab. It can be ordered from the Vitamin Shoppe at 800-223-1216 or *www.vitaminshoppe.com*.

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Dr. David G. Williams

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Curing Prostate Problems

Prostate cancer continues to be the second-leading cause of cancer death in men (lung cancer being number one), and it is estimated that one out of 11 men eventually will develop prostate cancer. Many will undergo surgery and/or radiation. But these current forms of conventional treatment can cause impotence, incontinence, and numerous other problems in a majority of the patients without significantly increasing longevity. But what nobody seems to be telling men is that this is not a death sentence. There are things you can do to keep your prostate healthy—and none of them involve radical surgery, radiation, or immune-destroying chemotherapy. In this special report I'll discuss some natural therapies that are proving to be powerful weapons against prostate cancer.

Getting It Right the Second Time: A Safe Alternative to PC-SPES

In February 2002, the product PC-SPES, a Chinese herbal mixture sold to treat prostate cancer, was pulled off the market. It was made by BotanicLab of Brea, Calif., which subsequently went out of business in June of that same year.

I followed the research and clinical data on PC-SPES for several years. There were a few completed studies and several studies underway during the five years it was on the market. Unlike many doctors, both natural and conventional, I never recommended the use of PC-SPES. It was one of those cases where something didn't "smell right."

Although PC-SPES reportedly contained only eight herbal ingredients, the California Department of Health Services along with several independent and federal authorities discovered that the mixture also contained warfarin, a prescription blood thinner; indomethacin, an anti-inflammatory drug; and diethylstilbestrol (DES), a synthetic form of estrogen. It became obvious rather quickly that the public had been duped into buying a product that was reported to be safe and natural when in fact much, if not all, of PC-SPES's activity was due to a combination of prescription drugs.

Each of these drugs has a long list of adverse side effects. For example, DES had previously been used to treat prostate cancer, but the treatment fell out of favor due to the unpleasant side effects and dangers. In hindsight, much of PC-SPES's ability to inhibit prostate cancer was apparently due to its estrogenic activity. That explained the estrogen therapy side effects such as impotence (erectile dysfunction), loss of libido, nipple tenderness, reduction in overall body hair, significant drops in lipoprotein(a), elevated blood triglycerides, breast swelling and enlargement, hot flashes, venous blood clots, and pulmonary thrombosis. As many as

The PSA Fiasco

I'm concerned about the potential overuse of the test that measures blood levels of a protein called prostate-specific antigen (PSA). Studies show that men with prostate cancer have unusually high PSA levels. Not surprisingly, medical specialists assume that lowering PSA levels lessens the risk of prostate cancer. However, the accuracy of PSA tests and the benefits of lowering PSA levels are uncertain; they are not as accurate at indicating prostate cancer as some people would have you believe.

Other physiological processes, both cancerous and benign, can also produce high PSA levels. For instance, high PSA levels may be common following ejaculation. In one study, levels were elevated immediately after ejaculation and didn't return to normal for two days. *(Urology 96;47:511-6)* Most men don't normally mistake sex for prostate cancer, but specialists looking at only one health indicator, believing they see the whole picture, might be doing just that.

Widespread PSA testing leads to thousands of unnecessary biopsies and over-treatment with radiation, surgery, and drugs—and hasn't improved the survival of men with prostate cancer. (*Urol Clin North Am 90;17:719-35*) (*JAMA 93;269:61-4*) Even more serious, such efforts may damage the body's innate ability to fight off cancer. I say this because research suggests that PSA actually fights cancer; so it's possible that lowering PSA levels might actually encourage cancer growth.

A Lesson in PSA Testing

PSA is produced by all of the cells in the prostate gland. It doesn't matter whether the cells are normal or cancerous. They all produce PSA. Cancerous or malignant cells, however, leak roughly ten times as much PSA into the bloodstream as do normal cells. Since the prostate generally increases in size as men age, the PSA levels will also increase as one gets older.

The following are the maximum PSA levels that most men should have:

- 40-49 years of age, 2.5 ng/mL
- 50-59 years of age, 3.5 ng/mL
- 60-69 years of age, 5.0 ng/mL
- 70-79 years of age, 6.5 ng/mL

If most urologists followed these guidelines, there would be far fewer biopsies. However, many urologists believe that biopsies should be performed on a male of any age who has a PSA level of 4.0 ng/ml or higher.

The Problem

Small elevations in PSA levels have become a gold mine for urologists, and have resulted in thousands of unnecessary biopsies and treatment programs, including radiation, surgery, and drugs.

Since PSA testing began, the apparent incidence of prostate cancer has doubled in the United States alone. It's not so much that the cancer rate is increasing, it's just that we're detecting more cancer. But better detection hasn't resulted in more cures. The mortality rate among prostate patients hasn't decreased at all. Instead, there are now thousands of men with asymptomatic, non-threatening, slow-growing prostate cancer, who previously were unconcerned but are now frightened to death for no justifiable reason.

The Solution

PSA levels should only be used as a guideline. Only about 75 percent of men with prostate cancer have correspondingly elevated levels of PSA (the cancer may be too small to increase PSA levels).

When PSA levels approach 10.0, there's about a 50 percent chance of finding prostate cancer. At that level the cancer will generally be confined to the prostate gland.

Even when PSA levels are between 10.0 and 20.0, cancer is not always present. However, when it does exist at these PSA levels, cancer is more likely to have spread to the lymph nodes.

Focus on the remedies in this report if your PSA levels are elevated (in the ranges above). You can continue to get them taken to monitor for changes, but remember that the levels should only be used as a guideline.

90 percent of those taking PC-SPES reported experiencing significant side effects.

But the true irony of the situation was, for many with prostate cancer, PC-SPES did slow the progression of the disease, and in many cases kept the cancer under control. PC-SPES did exhibit significant estrogenic and anti-testosterone effects. Granted, it produced serious and potentially life-threatening side effects, but I'm not familiar with any reported fatalities from using the product. Once it was pulled from the shelves, many individuals who were successfully using PC-SPES as their last resort were left with no viable alternatives.

Answers From PC-SPES's Ashes

Halfway around the globe, however, some of the world's top researchers and phytochemists were taking a closer look at PC-SPES. On one hand, they were understandably confused as to how the particular herbal ingredients in the product could produce such strong and serious side effects. Something obviously wasn't right. At the same time, they were carefully studying the effects of its ingredients, as well as

dozens of other herbs and natural compounds that could possibly influence prostate cancer cells. What they uncovered could be one of the most positive aspects of this entire story.

The Centre for Phytochemistry at Southern Cross University in Lismore, New South Wales, Australia, has become one of the leading centers for research on the cultivation, processing, and use of herbal medicines. The director of the Centre, Peter Waterman, PhD, is arguably one of the top phytochemists in the world.

Setting the Standard in Standardization

Prof. Waterman personally led the research team in developing a technique to standardize the *biological activity* in natural compounds. Never before, to my knowledge, has anyone been able to standardize biological activity.

Prof. Waterman took a giant leap forward in standardization by developing a method whereby the actual activity of an herb, or the activity of a combination of herbs, could be determined. Through this novel technique, varying amounts of a single herb or numerous herbs can be combined to obtain the desired activity of a product. At last, it can now be determined scientifically if the addition of one or more herbs to a formula increases *or decreases* the overall desired activity of a product. Until now, everyone has assumed, for example, that if herb A reduces prostate cancer and herb B reduces prostate cancer, then a combination of the herbs A and B will work even better.

That's not what Prof. Waterman and the other researchers discovered. Certain herbs or compounds that exhibited beneficial activity on their own actually suppressed or impeded the desired activity when used in combination, particularly if their amount was too high or too low. This discovery is a true breakthrough in the field of natural medicine. By following these exacting procedures, each and every batch of an herbal product can now be standardized for its actual activity.

Consistent Is as Consistent Does

One of the primary complaints with herbal and natural products has always been that there is no consistency. Because every single plant differs in its chemical makeup, there's no way you can predict with much accuracy how various batches of an herb will work, much less how a combination of herbs will work. The age of a plant, the soil it was grown in, when it was harvested, how it was transported, stored, and processed, and which other herbs it was combined with can all have an influence on its ultimate activity. The activity of a product could, and very often does, vary significantly from batch to batch. A prime example of this problem was PC-SPES.

In studying PC-SPES, Prof. Waterman developed a method to isolate and then check the activity of each individual herbal component of the product against prostate cancer cells. He also checked what happened when the various ingredients were combined. At the same time, he compared these results to those of PC-SPES itself. He discovered some very interesting and useful information.

As you might suspect, he found that the activity of PC-SPES was very inconsistent and unpredictable. He also found that while a select few of the herbs in PC-SPES exhibited anti-cancer activity in prostate cells, many of the ingredients showed no activity, and worse, when used in combination, they actually inhibited the anti-cancer activity of the active herbs. It became obvious that the activity of PC-SPES was more drug-related than herb-related.

From a more practical standpoint, however, Prof. Waterman had developed a method of determining exactly which herbs, plant extracts, and compounds had a positive outcome in stopping the division and replication of prostate cancer cells.

Using this technique, an Australian group of researchers and scientists working with Prof. Waterman began the laborious task of analyzing, testing, and re-testing dozens of complex formulations and what effect they had on prostate cancer cells. After months of demanding work, the group was able to painstakingly manipulate and adjust the final formula to produce the maximum possible effect in two human prostate cancer cell lines. (For those of you more technically inclined, these included the LNCaP model of human prostate carcinoma and the highly malignant human prostate adenocarcinoma cell line, PC-3. From my understanding, PC-3 is hormone-independent and LNCaP is hormone-dependent.)

The formula was first tested using these cell-line assays and then, based on the extremely encouraging

results, it was just recently tested in humans. The results were very positive.

The tedious and time-consuming work of these dedicated scientists has led to the development of a unique, natural, herbal prostate product that has been shown to slow and possibly even stop the growth of prostate cancer in humans. The final formulation was so unique that it received a patent.

The following is a list of the eight main ingredients in the formulation, called **HP8**. They come from various parts of the world, some available only in Australia. The label of the product doesn't list the exact amounts of each herb, rather they are listed as part of a proprietary blend. The blend and proportions of each ingredient will vary from batch to batch because the product is formulated to consistently achieve the maximum activity. The proprietary blend contains the following:

- Saw palmetto berry *(Serenoa serrulata)*
- Bromelain powder
- Licorice root *(Glycyrrhiza glabra)*
- Willow herb leaf *(Epilobium parviflorum)*
- Grape complex seed and skin *(Vitis vinifera)*
- Wild rosella calyx *(Hibiscus sabdariffa)*
- Passion fruit seed *(Passiflora edulis)*
- Selenium (from selenium yeast).

Although several individuals have independently tried the product, only one small study has been undertaken so far. Obviously, more extensive and long-term clinical trials and evaluations need to be performed. This is one of those situations where I personally have had the opportunity of watching this whole story evolve, and based on what I've seen thus far, I'll be very surprised if HP8 doesn't turn out to be one of the most important discoveries in the natural treatment of prostate cancer.

I've been able to test HP8 on several individuals, and the results I've seen parallel those of the following study. There have been no reports of any side effects whatsoever, which didn't come as a surprise to Prof. Waterman. While he was performing his cell line assays on dozens of herbs, he was concurrently conducting toxicology studies. I recently asked him if he knew of any dangers associated with taking HP8. The only danger he could think of would be if someone choked when swallowing the tiny pill. The toxicology studies were just as encouraging as the preliminary results of the subsequent cases outlined below.

Saw Palmetto

Roughly 75 percent of men over age 45 have some degree of benign prostatic hypertrophy (BPH). Along with prostate enlargement comes the familiar symptoms like difficulty in emptying the bladder, frequent night trips to the bathroom, and for some, prostate cancer.

Research shows that numerous prostate surgeries could be prevented with saw palmetto extract. A good example was a study involving 505 patients with symptoms of enlarged prostate or BHP. Each was given 160 mg of saw palmetto *(Serenoa repens)* twice daily. Using the International Prostate Symptom Score, which evaluates quality of life, urinary flow rates, residual urinary volume, and prostate size, patients began to see very significant improvements by the end of only 45 days. After 90 days, 88 percent of the patients and physicians considered the treatment successful. That's only 90 days, not the full year which is being recommended by the makers of Proscar. Even if the success rate remained at 88 percent, that would suggest that only 12 percent of the saw palmetto patients would need to undergo surgery compared to 60 percent of those using Proscar.

If your doctor isn't aware of saw palmetto, it's only because he/she hasn't been keeping up with the ongoing research. Saw palmetto extract is available from Enzymatic Therapy under the name Saw Palmetto Complex. For stores that carry the product and information on how to obtain it, you can call the consumer information service available through Enzymatic Therapy, Inc., 800-783-2286.

This small study involved 14 patients with either elevated PSA levels or known prostate cancer. Since this wasn't a formal clinical trial, there was less control over the participants. Several factors were evaluated in addition to recording PSA levels when they were known. They included things like ideal dosage levels and potential side effects, as well as any reported improvements in well-being or the ability to pass urine.

Of the 14 participants, 10 continued to have their PSA levels monitored while on HP8. Overall, 70 percent of this group experienced decreasing PSA levels after six months of using HP8. The drop in PSA levels varied between 15.4 percent and 86.7 percent, with the average decrease in PSA level being 43.5 percent. (During this time, the recommended

dosage rate hadn't been established. Some patients started out taking only two, three, or four tablets per day; it was later determined that six tablets per day seemed to give the best results.)

Four of the original 14 patients discontinued the therapy. The PSA levels of three of these four continued to increase. Of the three, one decided to undergo radiation therapy, the second decided to have an operation, and the third decided to try other therapies. The fourth individual stopped after 29 days, when his doctor encouraged him to undergo prostate surgery and radiation therapy.

Take It Somewhat on Faith

Writing about a product that has the potential to treat cancer is a sensitive situation. It's something I take very seriously. Ideally, I'd love for HP8 to have a proven track record of 15 years; dozens of successful, large, double-blind clinical trials to back it up; and the medical, legal, and political blessing of all. Unfortunately, I can't remember the last time that happened. Strangely, the product that came closest to this in recent memory was PC-SPES. It had a five-year run, several decent research studies, and the blessing of most.

There are several companies trying to sell ineffective PC-SPES knock-off products to capitalize on the void left in the marketplace. Fortunately, I believe that HP8 is unlikely to fall into that category. Behind it is some solid research that I expect will be published in the near future.

HP8 interrupts a stage of the cell cycle that prevents the division of cancer cells. It produced cell cycle arrest in 80 to 90 percent of the prostate cancer cell lines at the G2M stage, which prevented cell division. In simple terms, HP8 doesn't kill cancer cells. Prof. Waterman discovered that *it blocks prostate cells from dividing and multiplying.* Therefore, existing cancer cells age and die naturally, which lessens the chance of overloading the body's immune system. This also decreases the amount of toxins and the toxicity problems associated with large numbers of dead cells being dumped into the system. Additionally, HP8 has shown high bioactivity against both hormone-sensitive and hormone-insensitive prostate cancer cell lines.

While the benefits of HP8 still need to be tested extensively in human trials, I believe it is currently the only thing that can fill the void left by PC-SPES. I have yet to find any other product that has PC-SPES's potential, yet doesn't elicit severe side effects.

In the trial I mentioned earlier, the majority of those taking the product also reported experiencing more energy, an improvement in general well-being, improved ability to pass urine, and a significant reduction in pain and discomfort. In addition to its cancer-arresting components, HP8 also contains selenium, various fatty acids, enzymes, and other compounds known to improve overall prostate health and effectively treat benign prostatic hypertrophy (BPH, or enlarged prostate). In fact, at this stage, the only way HP8 can be marketed is as a supplement for prostate health. No mention can be made of its effects on PSA levels or prostate cancer cells.

The good news is that HP8 is now available as a prostate health supplement in the U.S. HP8 is manufactured under the highest standards in a pharmaceutically registered plant in Australia by InterHealth Biosciences Australia. It is currently distributed in the U.S. through American BioSciences of Blauvelt, New York, and sold through The Harmony Co., 888-809-1241 or *www.theharmonyco.com.*

Again, keep in mind that those making or selling HP8 can't make any claims or give any information on its use for treating prostate cancer. Legally, it is being sold strictly as a supplement for prostate health.

Based on the limited clinical research with HP8, it appears that the most effective dosage is three tablets twice daily (six tablets per day). It's possible that nine tablets a day could be used until PSA levels begin to drop, and then the dosage could be reduced to six per day, but there hasn't been any research to support that idea. It does appear, however, that HP8 works best when taken by itself. In other words, I strongly recommend taking HP8 on an empty stomach, between meals and any other supplements.

Like many of the therapies or products I discuss in *Alternatives*, HP8 presents a dilemma. Obviously, I'd love to have more well-designed clinical studies supporting the use of HP8. But I have to weigh that desire with several other factors. For one, I've personally seen its effects both in the laboratory and in patients. It's also non-toxic and readily available. There's a place for natural products like HP8.

It's definitely something you should know about. Rarely do you find a safe, effective, predictable, alternative treatment for cancer—any cancer. HP8 certainly may be one of these "finds." However, you should only take HP8 under the supervision of a qualified health practitioner, and if your PSA level continues to increase, you should consider other alternative or conventional treatments.

Grapefruit Can Stop the Spread Of Prostate Cancer

Many prostate cancers are very slow-growing and won't result in death, but fast-growing tumors can be very aggressive and will often metastasize to distant parts of the body within a matter of weeks—almost half of all prostate cancers metastasize to bone. Any time a cancer metastasizes, it becomes far more difficult to treat.

The prognosis of patients with metastasized prostate tumors is less promising than that of patients whose tumor has remained confined to the gland. With current conventional medical therapy, metastasized prostate cancer is considered incurable; therefore, keeping a prostate tumor from spreading could mean the difference between life and death.

Researchers at Wayne State University School of Medicine have released information that may help save the lives of many prostate cancer patients who would otherwise die from metastases. **Dr. Kenneth Pienta and his colleagues have discovered that when "modified" citrus pectin is given orally to laboratory animals, it can help stop the metastasis of prostate tumors.**

While the effects of modified citrus pectin are somewhat complicated, they were more pronounced with larger doses. (The pectin, however, did nothing to prevent the growth or formation of the primary tumor, regardless of the amount given.) Although the results of this study are encouraging, human studies need to confirm Dr. Pienta's work. Still, since modified citrus pectin has no ill effects, I wouldn't hesitate to use it now, especially if I were faced with an aggressive prostate tumor.

Citrus pectin is basically a fiber that provides the framework for fruits like oranges and grapefruits. Modified citrus pectin is different. In their prostate study, Dr. Pienta and his colleagues used an acid process to break down normal citrus pectin into smaller pieces. This "modified" pectin *is small* enough to be absorbed into the bloodstream. Once in the bloodstream, it binds to tumor cells and interferes with their ability to form metastases.

You can obtain modified citrus pectin from Longevity Science/Klabin Marketing, 2067 Broadway, Suite 700, New York, NY 10023 at 800-933-9440, or from EcoNugenics, 2208 Northpoint Parkway, Santa Rosa, CA 95407 at 800-308-5518 or *www.econugenics.com*. The recommended adult dosage is 10–15 grams a day, which is about one teaspoon taken two or three times daily.

More Good News About Garlic

Based on the latest research findings, anyone who has prostate problems should learn to

Tomatoes Did the Trick

In a study published in the *Journal of the National Cancer Institute*, individuals who ate more tomatoes, tomato sauce, and pizza had lower rates of prostate cancer. (For some reason, tomato juice was not as protective as either tomatoes or tomato sauce.) Men who ate at least 10 servings of these tomato-based foods per week were 45 percent less likely to develop prostate cancer. Men eating four to seven servings were 20 percent less likely.

Interestingly, these results support the fact that people of Mediterranean ancestry, who have one of the highest consumption rates of tomato sauce, also have the lowest rate of prostate cancer. Men of African-American descent, who consume the lowest amounts of tomato sauce, have the highest rate of prostate cancer.

Tomatoes are a rich source of lycopene, which appears to be the protective factor. Lycopene is the pigment that gives tomatoes, watermelon, pink grapefruit, and guavas their red color. It is a fat-soluble antioxidant and a relative of beta-carotene. However, it has roughly twice the power of beta-carotene and 10 times the strength of vitamin E when it comes to neutralizing free radicals.

Cooking the tomatoes or sauce seems to make it more effective and easier to absorb, which explains why increased rates of pizza consumption showed a positive benefit. Keep in mind, however, that if the pizza is loaded with fatty toppings, the potential dangers to your heart and cardiovascular system can outweigh any possible benefits to your prostate.

love garlic as much as I do, especially **aged garlic.** As garlic ages, a unique sulfur compound is formed called S-allylmercaptocysteine (SAMC). Researchers at Memorial Sloan-Kettering Cancer Center in New York report that SAMC can slow the progression of prostate cancer.

SAMC does this through a couple of different mechanisms. It speeds up the breakdown of the male hormone testosterone, which is known to encourage the growth of prostate cancer. (This explains why castration has become one of the accepted methods of trying to curtail the disease.) SAMC also decreases the production of certain proteins, which promote cancer cell growth.

Even if you eat garlic regularly, I recommend also taking it in supplement form. Be careful not to waste your money on garlic oil capsules, however, because most are 99 percent vegetable oil with just a touch of garlic. By far the best garlic supplements I've found come from Wakunaga of America. Their Kyolic Aged Garlic Extract is available in larger health food stores. To locate a store near you, go to *www.kyolic.com*. To order through the mail, contact Wakunaga at 800-421-2998.

You can find liquid and powdered garlic extracts in practically every health food store in the country. What may be harder to find is a doctor who will be familiar with this latest research and open enough to recommend these products. The important thing is that you now know how effective they can be, regardless of whether your doctor recommends them or not.

The Connection Between Estrogen and Prostate Cancer

For some reason, most people think of estrogen as strictly a female hormone and testosterone as a male hormone. In reality, both hormones are produced by both males and females. As men get older, their production of testosterone begins to decline while their production of estrogen remains the same or even increases. Some researchers now believe that the increasing estrogen-to-testosterone ratio is one of the factors that triggers a resumption of growth in the prostate gland, resulting in prostate enlargement or benign prostatic hypertrophy (BPH).

We now know that the estrogen-prostate relationship can easily be corrected through the use of soy powder. In much the same way that the soy phytoestrogens stop hot flashes, they can also help restore the proper estrogen-to-testosterone ratio that becomes skewed as men get into their 60s and beyond. If you're male and you are 55 years old or older or your family has a history of prostate or colon cancer, I would especially recommend soy to you.

Recommendations On Getting Into Soy

If you haven't developed a taste for tofu (soybean curd) or the fermented soy products miso and tempeh, you have a couple of nice options.

The first is roasted **soy nuts.** A handful a day of these little morsels is an easy and pleasant way to include some soy in your diet. If you can't find soy nuts at your local health food store, you can find them online at *www.drugstore.com.*

Another alternative is **soy flour or powder**, which is probably the simplest and least expensive way to benefit from the phytoestrogens in soy. You can get soy flour rather inexpensively from larger health food stores or through the mail. The Better Health Store (877-876-8247 or *www.thebetterhealthstore.com*) sells organic soy flour. It can be used in baking without any noticeable changes by substituting one-third of the wheat flour called for in the recipe with soy flour.

Probably the easiest way to ensure that you're getting soy in your diet is to mix it with juice or sprinkle it on your food. Most studies have shown soy's anti-cancer benefits are best achieved when consuming about 2 ounces of the powder or flour a day.

I would recommend storing soy flour in a tightly sealed container in the refrigerator. If you decide to sprinkle it on your food, keep in mind that it is rather bland and dry just like flour. You can use it by itself or mix it with something like no-fat or regular Parmesan cheese. The mixture can be placed in a sprinkling container and a little bit can be used with each meal. You can also experiment by adding other spices to make it more tasty.

Spice Up Your Love Life While Protecting Your Prostate

Zinc plays a major role in prostate health. It is just one of the trace minerals you're sure to be hearing more about in the years to come. Unlike the major minerals such as calcium or iron, trace

minerals are hard to measure in the body. Zinc, for example, is stored in the eyes, sperm, skin, hair, fingernails, toenails, white blood cells, pancreas, and of course the prostate gland which contains more zinc than any other part of the body. Researchers have analyzed zinc levels in the blood, hair, liver, and urine, but nobody really knows what the ideal levels should be. They do know, however, that zinc deficiencies can cause a wide variety of problems—especially prostate problems.

Zinc can help stop the conversion of testosterone into hormones that increase prostate growth. Most studies I've seen use at least 15 mg of zinc once a day. One good source of zinc (as well as the essential fatty acids necessary for normal prostate function) is pumpkin seeds. But oysters, known for their aphrodisiac effects, are the best food source for the trace mineral, packed with up to 150 mg of zinc per 100 grams.

Note: If you take 15 mg of zinc, you should also take 1-2 mg of copper since zinc can interfere with copper absorption (and vice versa).

Quercetin Works, Too

Another underutilized compound that is effective at treating a wide variety of prostate problems is the bioflavonoid quercetin. In one study, a dosage of **500 mg of quercetin twice daily** proved very effective in a period of just two weeks. In 11 patients suffering from prostate pain, nine experienced *complete* relief of their symptoms and the other two reportedly improved. In nine other patients with non-bacterial prostate inflammation, six had complete resolution of their problem and one improved. In 19 patients who were experiencing chronic bacterial prostatitis, eight experienced complete remission and one showed significant improvement. Out of this entire group, regardless of the problem, there was a complete resolution of symptoms in 59 percent of the cases. For the cases with no infection, the success rate was 75 percent. *(J Am Nutraceutical Assoc 99;2(2):36-39)*

Onions are a good source of quercetin, but it is also available as an individual supplement. In most cases, quercetin seems to work better with vitamin C. If you have recurring or chronic prostate problems that don't seem to respond to traditional therapies, a two-week trial of quercetin could be a viable option.

Dr. David Williams

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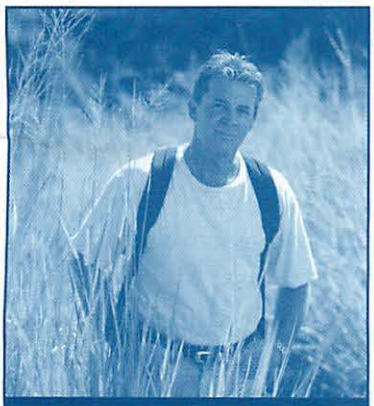

Dr. David G. Williams

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How to Stop a Heart Attack or Stroke Before it Happens

Despite the fact that it has been touted as a way to prevent everything from heart attacks to colon cancer, and unlike most doctors, I have never felt comfortable recommending the regular use of aspirin. I do acknowledge that occasional use may be okay and that it can be a lifesaver when taken at the first sign of a heart attack. However, taking aspirin continuously as a preventive can cause more problems than benefits.

A lot of people don't understand why I feel this way. I think their confusion comes from a steady stream of studies that seem to confirm aspirin's miraculous powers. When studies came out suggesting that aspirin might help prevent second heart attacks, aspirin consumption in this country skyrocketed. Just a few years ago (April, 2000), a glowing report from France concluded that because of aspirin's ability to prevent venous blood clotting it could be used routinely following many surgical procedures that entail risk of blood clotting. This study focused on the use of aspirin following hip replacement therapy. *(Lancet 00;355(9212): 1288-9)* It's another study cited as additional support for routinely using aspirin.

The Truth About An-Aspirin-A-Day

Unfortunately, the public isn't told the whole truth behind such studies. Several doctors not associated with the above study reviewed the data and concluded that "a study that was essentially negative was presented as a positive...aspirin did not reduce vascular deaths, had no significant effect on major nonfatal vascular events other than deep vein thrombosis, but did result in an excess of six per 1,000 postoperative transfused bleeds...[and] dangerous generalizations about the benefits of aspirin have been made that unfortunately may have dire consequences for patient care." *(BMJ 00;321 (7260): 569)*

In addition to triggering gastric bleeding, more and more research points to the fact that it can increase the risk of heart attack and stroke in as much as 40 percent of the population. And scientists recently determined that using aspirin for a period of ten or more years is associated with a 44 percent increase in the risk of developing subcapsular cataracts (the most common and disabling form of cataracts). The aspirin-related risk was greatest in those under age 65. *(Ophthalmol 98;105:1751-1758)*

Dr. Michael Buchanan, a pathologist at McMaster University in Hamilton, Ontario, gave aspirin doses (ranging from 80 to 1,300 mg daily) to 86 patients. The patients were from three groups: bypass patients, other hospitalized patients, and healthy volunteers. During the study the "bleeding time" of all the participants was carefully monitored. (Aspirin's reported benefit comes from its ability to stop blood platelets from sticking together and forming clots. This, in turn, decreases the chance of blockages, which can lead to heart attacks and strokes. It also increases how long an individual will bleed before clotting takes place or "bleeding time.") Dr. Buchanan discovered that aspirin actually decreased the bleeding time in 40 percent of the patients, which would make them more susceptible to strokes and heart attacks! He recommends that anyone who is a prospect for regular prophylactic use of aspirin be tested first.

Dr. Buchanan's work is further supported by Dr. Grotemeyer in Germany, who has been studying the effects of aspirin on blood clotting for several years. *(Fortschr Neurol Psychiatr 85;53(9):350-3) (Throm Res 91;63(6):587-93)* Dr. Grotemeyer recently followed the health outcome of 180 carotid stroke patients for two years. All were given aspirin to prevent the recurrence of secondary strokes, heart attack, or cardiovascular-related death. The aspirin seemed to reduce platelet activity and retard blood clotting in all patients. However, 12 hours after taking it, platelets in 33 percent of the patients actually showed more activity than normal. (The aspirin apparently triggered a rebound reaction that promoted blood clotting.) These patients were referred to as secondary nonresponders to aspirin therapy, but were continued on the aspirin along with the other patients (the aspirin responders). During the next two years five of the 114 aspirin responders died from a cardiovascular event, like secondary stroke, heart attack, etc. Of the 60 secondary nonresponders, 24 died of such events.

There are at least two lessons to be learned from this:

- Be wary any time someone suggests taking a drug or synthetic substance on a continuing basis to prevent disease or improve health. An apology or "late breaking update" years down the road won't mean much if your health is ruined.
- If you're dead set on using aspirin, tell your doctor to research the above studies. Then have him/her perform the proper tests to determine if you are among the 40 percent of people who increase their risk of stroke, heart disease, or other cardiovascular event by taking aspirin.

How to Block the Ill Effects of Aspirin

If you or your doctor are determined that you take daily aspirin for any reason, it's important to take steps to minimize gastrointestinal bleeding and counteract the loss of vitamin C, folic acid, and iron that bleeding causes. To make up for nutrients lost due to bleeding, make sure your multivitamin/mineral provides you with at least 1 gram of vitamin C and 400 mg of folic acid per day. Also, periodically have your doctor check your iron levels—especially if you are still menstruating. If your iron levels are below normal, you may also need a daily iron supplement. Here are some additional nutrients you should consider.

To help prevent bleeding in the first place, wash aspirin down with 10 to 12 drops of **Tabasco** mixed with a little water, or take it along with a red pepper capsule. I don't know anything that will neutralize the increased stroke risk, but I think you're better off substituting red pepper for the aspirin. **Capsaicin** (a major component of red or cayenne pepper) has been shown to help protect the stomach lining from bleeding (and lower triglycerides and improve the clot-dissolving ability of the blood). *(Gastroenterology 89;96:1425-1433)* Capsaicin is available from Frontier Natural Products at 800-669-3275.

Deglycyrrhizinated licorice (DGL) is often used to treat ulcers. DGL works by helping the stomach and intestines produce more protective mucus. One study found that taking 350 mg of DGL with each dose of aspirin helped prevent gastrointestinal bleeding. *(Scand J Gastroenterol 79;14:605-7)* DGL tablets must be chewed, not swallowed whole, to be effective. A reliable source

for DGL is Enzymatic Therapy. Their products are sold in health food stores. If you can't find them, call Enzymatic Therapy at 800-783-2286. They'll help you locate a store in your area that carries their products.

Rhubarb. Although practically unknown in medical circles, rhubarb can be very effective at stopping upper digestive tract bleeding. Chinese researchers discovered that 15 grams daily of raw rhubarb powder or tablets, or roasted rhubarb powder, stopped digestive tract bleeding in 95 percent of cases. The 15-gram dose was divided and given throughout the day. Although practically all of the 400 individuals given rhubarb initially experienced abdominal pain and cramping, the rhubarb stopped the bleeding quickly. The initial pain was not intense enough to require intervention, and it lessened or stopped completely once the individuals had a bowel movement. (Unlike many medications to stop gastrointestinal bleeding, rhubarb increased bowel movements instead of bringing them to a halt.) *(Pharmacology 80;20 (Suppl 1):128-130)* Bulk rhubarb powder isn't always easy to find in health food stores, but it can be ordered through the mail from places like Penn Herb Co. Ltd., 800-523-9971. (Doctors and health professionals can obtain it from Nuherbs, 800-233-4307.)

A Tropical Alternative to Aspirin

Bromelain, the protein enzyme from pineapple stems and fruit, provides aspirin-like benefits without dangerous side effects. Like aspirin, bromelain decreases the stickiness of blood platelets, improves blood flow, and increases the ability of blood cells to break down and remove foreign or damaged proteins. In addition, bromelain lowers blood pressure, increases the efficiency of the heart, and even helps in cancer prevention and treatment. As an added benefit, bromelain inhibits the formation of particular prostaglandins that increase inflammation and promotes the formation of beneficial prostaglandins that have anti-inflammatory effects. Aspirin, on the other hand, inhibits the production of all prostaglandins, good and bad.

I've used bromelain to successfully treat indigestion, chronic sinusitis, and heart disease and to inhibit appetite and increase the breakdown of body fat. Bromelain and bromelain-based products also work miracles at minimizing bruising and speeding healing after cosmetic surgery. Every plastic surgeon in the country should be recommending these products to their patients.

A few people tend to be allergic to bromelain, and at the highest dosages it can cause temporary problems like diarrhea or skin rash. Overall, however, it is considered a very safe, non-toxic compound. (If you're allergic to pineapple, bromelain likely will cause problems for you.) Excellent results can be achieved by taking 2-4 grams of bromelain per day. To help relieve indigestion or to improve general digestion, it's best to take bromelain with meals. For any of the other problems mentioned, the dosage should be divided and taken two or three times during the day between meals. You can buy bromelain tablets in most health food stores. An excellent mail-order source is Freeda Vitamins, 36 East 41st St., New York, NY 10017 or at 800-777-3737. If you mention that you're a subscriber to *Alternatives*, they'll give you 20 percent off your order.

Bromelain is an inexpensive, underutilized healer. Not surprisingly, most of the research on this compound has been undertaken by the pineapple industry. The pharmaceutical companies want nothing to do with this amazing substance unless it can be patented. Fortunately for us, it can't.

The Clot-busting Miracle

Blood delivers nutrients and oxygen throughout your body, directing antibodies to areas of infection, sending heat in your body out to your skin, and excreting waste products from your body. When your circulation is impaired, these functions are greatly compromised.

Unfortunately, too many people learn to live with impaired circulation. Because blood vessels become clogged gradually and the detrimental effects appear so slowly, most people accept new circulation-related limitations simply as a sign of aging. (Some people do experience the ill effects of

decreased circulation quickly. Later in this report, I'll talk about why some end up with chronic illness while others, exposed to the same pathogens, recover quickly.)

Dozens of common health problems have improved dramatically when proper circulation has been restored, but not by conventional medication. For the vast majority, it is not the best way to keep the circulatory system performing at peak levels.

Conventional Medicine Isn't the Answer

Products like aspirin, heparin, and Coumadin (warfarin) are standard tools for "thinning" the blood to increase blood flow. When blood flow is drastically impaired or actually stops because of a clot, conventional medicine's answer is ultra-expensive "clot-busting" drugs like streptokinase, Activase, and urokinase. When these fail, the answer is bypass—blood vessels from other parts of the body are sewn in place to "bypass" the blockage.

"Blood thinners"—natural or otherwise—may provide relief, but they don't provide a "cure." Impaired circulation must be treated at a much deeper level. In the early days, health pioneers recommended saunas, massage, and hot springs to increase circulation. We now know that regular exercise can be enormously beneficial in improving circulation and blood flow. And vitamins, minerals, and herbs—some of the most beneficial being niacin, lecithin, and ginkgo—act as antioxidants and help prevent free-radical damage to blood vessels and other tissue.

The Japanese Secret

As you will learn in the months ahead, I spend a great deal of time researching and traveling the world for true cures, not just "cures" that treat symptoms. I bring the results to you each month in *Alternatives*. For the last few years or so, I've been researching and investigating a product that appears to get to the root of many problems associated with impaired circulation.

Japan has one of the highest rates of fish consumption in the world and some of the lowest rates of depression, homicide, and suicide. For years, their health statistics have been used to support the benefits of eating fish. Historically, the Japanese have also experienced less prostate and breast cancer, less heart disease, and greater longevity. No doubt, these benefits also can be attributed to their high fish and seafood consumption. They also have one of the highest consumption rates for soybean products. Closer examination of research data indicates that consumption of natto, a soybean-based food, may contribute to their high degree of good health.

Natto is a fermented product made by adding spores of the beneficial bacteria *Bacillus natto* to boiled soybeans. It has been referred to as "vegetable cheese" because many people report that it tastes like cheese. The average per capita annual consumption of natto in Japan is roughly 4.5 pounds. Natto has been used in Japan for at least 1,000 years to treat heart and vascular diseases, beriberi, and fatigue.

Understanding Blood Clots

In 1980, Doctor Hiroyuki Sumi, who was completing his chemistry degree at Chicago University Medical School, was searching for a natural compound that would dissolve blood clots in arteries. Through testing 173 different foods, he concluded that natto exhibited the strongest thrombolytic activity. Further research revealed that an enzyme in natto had the ability not only to prevent fibrous clot formation but also to dissolve already-formed fibrous blood clots. He named the enzyme nattokinase ("enzyme in natto"). Natto and/or nattokinase could be one of the most significant breakthroughs in treating a long list of diseases.

To fully understand the benefits of natto and nattokinase, you have to have a basic understanding of how and why clots, or fibrin deposits, are formed. Your body produces numerous compounds whose sole purpose is to make blood clots (thrombi). Your ability to form blood *clots quickly* can prevent you from bleeding to death if you're cut and stop excessive blood loss after trauma or injury. Pathogens (such as bacteria, viruses, and fungi) and toxins trigger the release of the com-

An Important Amino Acid for Smokers

The amino acid taurine has recently been shown to help prevent the effects that smoking has on blood vessels. While I'm certainly not suggesting that taurine is the answer to smoking (the answer is to quit), it may help negate one of its side effects.

After smoking, blood vessels constrict, increasing blood pressure and impeding blood flow. In a study published in an issue of the journal *Circulation*, researchers in Dallas found that when smokers took 1.5 grams of taurine a day, their blood vessels functioned the same as those of non-smokers.

Taurine is a safe, naturally-occurring amino acid most commonly found in fish, and most of us are probably getting adequate amounts of it from our diet. But for those who need a boost, supplementing with taurine appears to make sense. Jo Mar Laboratories, 800-538-4545, *www.jomarlabs.com*, sells taurine in both powder and capsule form.

pound thrombin. This begins the chain of events that result in fibrin production.

Fibrin is made up of sticky protein fibers that can accumulate and stick to blood vessel walls or continue to circulate in the bloodstream. Fibrin slows blood flow and forms a matrix for blood clots. Think of a clot as a lump or plug that stops blood from flowing through a vessel. When clots occur in vessels of the heart, the heart muscle is deprived of oxygen and quickly begins to die. The result: angina or a heart attack. A similar situation occurs when clots migrate from the heart to the brain or form in blood vessels that supply brain tissue. This can result in nerve cell death, which manifests as senility and/or stroke.

In the absence of or prior to full clot formation, fibrin accumulations create hyper-coagulation or "clogging" in blood vessels. When blood coagulates more than normal, an outright clot and complete blockage might not occur immediately. Blood flow simply might begin to slow down. When that happens, fibrin strands start sticking to artery walls and blood flow is slowed even more. Over time, it slows to a trickle in the smallest vessels, the capillaries. The surrounding tissue begins to starve for oxygen, while increasing amounts of toxins and waste material accumulate.

Why Circulation Slows Down

As I mentioned earlier, your body makes several compounds to promote clotting (or thrombi). But it produces only one enzyme to dissolve and break down fibrin in blood clots. That thrombolytic, or "clot-busting," enzyme is called plasmin. Plasmin is normally produced in the endothelial cells that line the interior walls of arteries, veins, and lymph vessels. To control excess bleeding and increase blood flow when necessary, the body must produce a proper balance of these enzymes. In a very large segment of the population, the thrombolytic enzymes that reduce blood clots and hyper-coagulation are in short supply. Various factors contribute to this imbalance and trigger hyper-coagulation of blood:

- **Genetic Defects** can inhibit the production of plasmin and other enzymes needed to prevent hyper-coagulation and/or clotting. *(Blood Coagulation & Fibrinolysis 99;10:1-4) (Genetics In Medicine May 2002)*
- **Aging:** As we age, our blood vessels become less elastic and blood flows more slowly through capillaries, which increases its tendency to coagulate.
- **Sedentary Lifestyles:** Exercise promotes the development of collateral blood vessels and helps maintain their elasticity.
- **Low Antioxidant Levels:** Antioxidants scavenge free radicals that, left unchecked, inflame endothelial cells lining blood vessels and cause the release of clot-promoting enzymes.
- **Improper Fats:** Unsaturated fatty acids are essential components for the formation of nervous tissue and an integral component of every cell wall and membrane in the body. They form one of the first lines of defense against various

pathogens and toxins trying to invade cells. When essential fatty acids are deficient, your body has to use inferior fats for building and repair. Fragile or weak arterial cell walls are more susceptible to damage, which triggers the release of blood-clotting enzymes.

- **Toxins** (pesticides; herbicides; industrial chemicals; household cleaners; sprays; toxic metals; vaccinations; air, water, and food contamination; etc.) are fat-soluble, fat-loving molecules that selectively bind to fatty barriers in the membrane of endothelial cells. They quickly dissolve in fatty tissue, which enables them to set up residence in the nerves, brain, liver, and kidneys. These "neurotoxins" have been linked to hypercoagulation.

- **More-Virulent Pathogen Exposure:** Due to the overuse of antibiotics and the resulting resistant strains that have emerged, we are exposed to more and more dangerous forms of bacteria. Mutations are occurring at an alarming rate among numerous strains of viruses, molds, and fungi, making them far more virulent. Most, if not all, of these pathogens directly assault the endothelial cells, eventually causing the formation of more fibrin, which in turn contributes to hyper-coagulation.

Hyper-coagulation and fibrin deposits make ideal breeding grounds for these disease-causing pathogens. Most of the bacterial pathogens are also anaerobic. In other words, to survive and replicate they require a low-oxygen environment. By triggering inflammation and other processes that impede circulation and increase fibrin production, they insure their survival. Under normal circumstances, plasmin and other fibrolytic ("fibrin-cutting") enzymes rush to the scene, clear up the mess, and open up circulation.

The Threat From Fibrin

For an increasing number of people, however, this doesn't happen. Instead, they end up with a chronic illness that becomes almost impossible to get rid of. Their bodies quickly produce large amounts of fibrin that is deposited on top of the infected cells and bacteria. This seals bacteria off from the immune system and shuts off or greatly decreases the blood supply to the area. The pathogens no longer have to worry about oxygen levels

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How to Make Natto

There are various ways to make natto. This method (by Kazuo Shiroki) uses the natto bacteria (*Bacillus natto*) available in the United States and Canada. I strongly recommend using spores of *Bacillus natto* instead of a commercial package as the natto bacteria base. *Bacillus natto* spores are more economical and reduce the risk of contamination. You can obtain *Bacillus natto* spores from Gem Cultures at 707-964-2922 (a very small company). Spores can be kept in the refrigerator for a long time.

If you use commercially-produced natto instead of natto bacteria, substitute one pack of natto for 0.0035 ounces (0.1 gram) of natto bacteria in the recipe below.

Utensils:

- A bowl to immerse soybeans
- A sieve to drain them
- A steamer
- 2 casserole pans, about 10" x 2" deep
- Aluminum foil
- 2 (8" to 12") pie plates to hold water
- An oven thermometer
- 1 work lamp or lamp stand without a shade (optional)
- 1 40W light bulb
- 1 heat-resistant cup, teaspoon, and spatula
- Rubber gloves (Disinfect gloves in hot water before using, to prevent food contamination.)

How to Make Natto (continued)

Ingredients *(makes 2.6 lbs. of natto)*:

- 17.5 oz. soybeans (smaller soybeans are better)
- 0.1 g *Bacillus natto* bacteria
- ¼ tsp. natural salt
- ½ tsp. brown sugar or molasses

Preparation:

1. Wash soybeans thoroughly, and soak in three times as much water (by volume) for 12 hours at room temperature.
2. When soybeans have swollen to twice their dry size, steam them in steamer for six hours or until they can be easily mashed between two fingers.
3. Two hours before soybeans are finished steaming, make air holes in aluminum foil. (Without enough air circulation, natto may become bitter; with too much, its surface may become dry.) Cover *empty* casserole pans with aluminum foil and place on top oven rack.
4. Fill deep plates halfway with water and place on middle oven rack. (The water will keep the natto from drying out.) Also put heat-resistant cup and teaspoon in the oven. Heat oven to 250° F to sterilize the utensils (this reduces the chance of contamination) and warm the water. When the oven has been adequately heated, turn it off and allow to cool naturally.

   Note: It is essential to maintain a temperature of approximately 104° F for successful fermentation.

   *Work quickly from this point on to prevent introduction of harmful bacteria.
5. When finished steaming soybeans, strain water by keeping lid in place while tipping steamer.
6. Remove lid and steamer, leaving soybeans in pot. Put lid back quickly so as not to contaminate the soybeans and lose heat.
7. Pour 2 teaspoons of pre-boiled water into a cup. Mix in salt, sugar, and 0.1 g of natto bacteria. Natto bacteria spores are very resistant to heat. It will take one hour at 285° F to kill all the natto bacteria, but make sure the water temperature is below 175° F.
8. Remove lid from pot, sprinkle salt solution over soybeans, and stir to evenly distribute bacteria.
9. Carefully uncover casserole pans and spread soybeans in a one-inch thick layer. (Soybeans should be no more than three beans deep.) Cover with aluminum foil.
10. Make sure the oven has cooled, then put foil-covered pans on top oven rack. Leave plates filled with water on middle rack. The water should have cooled to around 105° F.
11. Place a work lamp fitted with a 40W bulb in the lower part of the oven. (You may use the built-in light in the oven, but it does not warm the oven evenly.)
12. Place thermometer on the upper rack and close the door. Check the temperature after a few hours. To keep oven temperature between 100° and 107° F, you may have to change light bulb to a different wattage or keep the oven door propped open a crack.
13. Natto will be ready in 20 to 24 hours. After that, switch lamp off and wait a few hours until it cools, stopping the fermentation. When aluminum foil is removed, soybeans may have turned partially white, and you may be able to smell the natto. Some ammonia smell is normal, but if it is too strong, undesirable germs may have flourished.

    Note: Natto is very sensitive to air circulation, temperature, etc., so this can affect the outcome of the fermentation. If fermentation is not successful, the finished natto may not be sticky or stringy, may be bitter, or may have a strong ammonia smell.
14. Age natto in the refrigerator for up to one week. It will develop a nice stringiness and improved taste. If left in the refrigerator too long, however, the amino acids will crystallize and the texture will be sandy. The best way to prevent this is, after aging it, to divide it into several small packages and freeze.

    Note: This recipe was copied (with permission) and condensed from *www.gaia21.net/natto/natto.htm*. Visit this site for more information on natto. If you don't have a computer to access the Internet, you can usually use one at your local public library.

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getting too high or white blood cells from the immune system reaching them.

Other people cannot break down and remove fibrin deposits due to a lack of enzymes. These bacteria-laden deposits can wreak all kinds of local havoc, depending on their location, and they constantly tax the immune system with toxins and "leaking" bacteria. If the deposits form in muscles, they become constantly sore and inflamed (fibromyalgia). If in the uterus, pregnancy might be impossible; and it's not uncommon to experience constant pain and other problems in that area. The deposit could be in the liver, brain, or practically anywhere in the body. That's why the correction of hyper-coagulation can be beneficial in so many different and difficult cases.

Hyper-coagulation helps explain why one person develops a chronic illness while someone else, exposed to the same pathogen, recovers quickly. The breakthrough in the way we look at chronic illnesses actually came about through simple observation when researchers noted that many individuals suffering from chronic illness benefited almost immediately after being given various forms of anticoagulant drugs such as heparin and warfarin. Further investigation revealed that they had genetic defects that kept them from properly regulating the coagulation of their blood. *(J Lab Clin Med 97;130:540-43)* Reports began to surface showing that the majority of individuals with chronic fatigue syndrome and fibromyalgia could also be helped with anticoagulant therapy. *(Blood Coagulation & Fibrinolysis 99;(10):1-4)*

Clot Busters That Really Work

Using anticoagulant drugs—or even natural "blood thinners"—treats only the surface of the problem. Thinning blood and making blood cells less "sticky" temporarily allows more blood to flow through an area with blockages. The real solution is to actually remove the fibrin deposit or clot. That brings us full circle—back to drugs like urokinase, streptokinase, and Activase. While these drugs have attained a degree of success, they all come with their own set of problems.

For one, they are extremely expensive—so expensive, in fact, that not all clinics and hospitals stock the drugs. If they do, they use them only when someone arrives at a hospital within minutes after a stroke or heart attack, because they have to be injected quickly following one of these incidents. This is because the drugs' fibrinolytic activity (ability to dissolve clots and fibrous tissue) lasts for about 4 to 20 minutes.

Until just recently, we really didn't have any natural solution to remove fibrin deposits, but from every indication, it now appears that natto and nattokinase are the natural solutions we've been searching for. Japanese researchers have shown that 100 grams of natto exhibits the same fibrinolytic activity as a therapeutic dose of urokinase. Even more remarkable is the fact that while an injection of urokinase is effective for only 4 to 20 minutes, nattokinase (the enzyme in natto) maintains its activity for four to eight hours. *(Acta Haematol 90;84:139-143) (Hemorheology and Related Research Vol. 5(1):43-44) (Data from Japan Functional Food Research Assoc)*

There are so many conditions that might benefit from natto that it's hard to list them all. Listing all the problems that would benefit from improved circulation alone would be an extremely long list that would include chronic fatigue syndrome, fibromyalgia, and multiple sclerosis. Natto is considered to be safe and beneficial. It has not been associated with any ill side effects, nor have I seen any reports of allergic reactions.

The Nattokinase Option

Natto isn't readily available in this country unless you live in an area where there is a large Japanese population. You can make it yourself (see recipe on page 6), or purchase nattokinase in capsules. Nattokinase is available in the U.S. through NutriCology. Their product is NattoZyme. You can contact them at 800-545-9960 or *www.nutricology.com*. (NutriCology also sells to health professionals under the name Allergy Research Group.) One serving of natto provides 2,000 FU of nattokinase, which is the ideal level for general health (4,000 FU for a

therapeutic dose). To get 2,000 FU with the NutriCology product, I recommend taking 1 capsule in the morning and 2 before bed.

There are only a couple of precautions for taking nattokinase or eating natto:

If you take the prescription drug warfarin to prevent blood clots (it's also used as rat poison!), do not eat natto or take nattokinase. Natto has a high vitamin K content, which may impede the effectiveness of warfarin. (It is not uncommon for doctors to tell their patients who are on warfarin to avoid other vitamin K–rich foods such as cabbage and the green algae chlorella.)

Natto can be used anytime during the day, but if you're at risk of stroke or heart attack, it has been suggested that it be eaten or taken with the evening meal. Since most heart attacks and strokes occur within a few hours of rising, this should provide a greater degree of protection. (This is also the primary reason for recommending that two capsules of the enzyme nattokinase be taken at bedtime.)

Nattokinase is one of the most significant tools for improving chronic circulation problems I have uncovered in the last several years. If you suffer from any of the problems discussed in this report, it's something you should consider. And, if your risk of stroke or heart attack is high, I recommend keeping a bottle of nattokinase on hand. It can provide you with some of the best clot-busting activity at a fraction of the cost of drugs. Following a heart attack or stroke, time is of the essence. The sooner you put nattokinase to work, the better the ultimate outcome will be.

Foods That Help Keep Your Heart Healthy

There are so many delicious foods that actually help your heart, it's hard to imagine why anyone ever dreamed of creating the fake foods that line grocery aisles today. There are also dozens of healthful ways to prepare them. Choose organic, unprocessed foods whenever possible. We are blessed to live in a society that offers such a wide variety of wholesome foods, many of which are organically grown. When you consider the bounty available to us in this country, we likely have a better chance of preventing heart disease than those who live in any other country on Earth!

The Nut Your Heart Will Love

At the University of California, Davis, researchers have found that consuming as little as 5 ounces of walnuts a week can reduce your cardiovascular disease (CVD) risk by 30-50 percent. *(Am J Clin Nutr 01;74:72-9)*

Walnuts contain a mix of both omega-3 and omega-6 polyunsaturated fatty acids (PUFAs). When walnuts were added to the diets of 13 women and 5 men ranging in age from 52 to 68 years, there was a very significant lowering of both total cholesterol and the low-density lipoprotein (LDL) form of cholesterol.

For some reason, walnuts affect fat metabolism differently than other food sources of omega-3 and omega-6 fatty acids, such as fish oil and soybean products. And adding them to your diet is simple. A couple of walnuts a day is all it takes to keep your heart healthy.

Incredible, Edible Eggs

Let's start with one of my favorite heart-supporters, eggs. For years the public has been told to avoid eggs, especially the high-cholesterol yolks. The egg scare started in the 1950s and 1960s, during a promotional campaign condemning cholesterol. Patients and doctors alike still hold fast to the idea that eggs are bad for you because of their high cholesterol content, even though hundreds of studies have shown that the amount of cholesterol we eat has very little influence on our cholesterol blood levels. More to the point, specific studies have shown that consuming moderate amounts of eggs does not affect cholesterol levels. A study reported in the *British Medical Journal* showed that seven eggs a week, combined with a low-fat, high-complex carbohydrate, high-fiber diet did not raise cholesterol levels. *(British Medical Journal, Volume 294, Page 333.)*

Egg yolks do contain a large amount of cholesterol, but what has been overlooked is the fact that they are also one of the richest sources of choline, a component of lecithin, which many people have eliminated or reduced in their diet. Choline acts like a fat and cholesterol dissolver. It keeps the cholesterol in the egg moving through the bloodstream and doesn't allow it to stack up on arterial walls. Lecithin breaks fats into small droplets and improves digestion. It also keeps cholesterol soluble, which keeps it moving in the bloodstream and helps prevent blockages or clots. Eggs are also rich in minerals, vitamins, and essential amino acids.

Fall in Love With Onions

I love onions—which is fortunate because a love affair with onions can have a profound effect on heart disease. It is well-known that blood cells become sticky and prone to developing clots and blockages immediately following a meal high in fat. Vitamins E and C will counteract this effect to a degree. An even better solution (short of not eating high-fat meals in the first place) is to eat a healthy dose of onions with your meal.

In the 1960s, a researcher in India found that when two ounces of grilled onions were eaten with a meal containing 90 percent fat, cholesterol levels didn't increase, platelets didn't get sticky and clump, and blood-clotting compounds like fibrinogen weren't produced. Just this small amount of onion stopped the heart disease-promoting events generally triggered by a high-fat meal. *(Indian J Med Res 66;54(1):48-53)*

Japanese researchers found that a sulfur-type molecule in onions and garlic helps prevent blood clot formations. Dr. Victor Gurewich of Tufts University had 20 patients with abnormally low HDL cholesterol levels (the good, protective kind of cholesterol) eat a raw onion a day. The onion a day raised HDL levels an average of 30 percent, enough to bring all the patients' blood levels back into the normal range.

To be effective, the onions must be raw, as cooking inactivates the molecule. If you want to lower your blood pressure, improve your cholesterol levels, and dramatically lessen your chance of ever having a heart attack, start eating half a raw onion every day. HDL levels will rise 30 percent or more, but it takes between two and three months to see the jump, and you have to eat raw onions regularly for several months to raise HDL levels. As a health bonus, you can also add minced or chopped onion or garlic to oil before cooking to gain the benefit of their antioxidant properties.

Pour Yourself a Cup of Tea (Especially With a High-fat Meal)

High-fat meals set up a cascade of events that almost immediately keeps your arteries from dilating, which slows down your blood flow. We've known for some time that certain antioxidants, such as vitamin C, taken before the meal can help prevent this problem. I also just shared with you how onions can also help. New research has found that, if you don't have any vitamin C or onions handy, you can achieve similar effects by drinking either green or black tea during the high-fat meal.

Researchers from the University of Maryland measured the changes in arteries of 30 individuals before and after eating a high-fat, fast-food breakfast that contained 50 grams of fat and 900 calories.

Individuals who drank either green or black tea with the meal were spared many of the initial ill effects. Those drinking a placebo tea without antioxidants still experienced the dramatic decrease in arterial blood flow.

While tea won't protect you from the long-term effects of a high-fat diet, at least you'll be able to lower the chances that you'll suffer a heart attack or stroke during or immediately following such a meal. Seriously, drinking one of these teas with any meal can provide a significant degree of protection and may be a real lifesaver for those who already suffer from advanced heart disease. Such teas are widely available at grocery stores and health food stores.

Fish and Fish Oil

Studies have shown that eating at least two ounces of fish a week could cut the risk of heart disease in half. *(NEJM 85;May 9:(312):1205)* Fish oil has been shown to lower triglyceride and cho-

Fish That Are Good Sources of Omega-3 Oils

Less Than 500 mg	500 mg to one gram	Over one gram
Atlantic Cod	Carp	Albacore Tuna
Atlantic Pollock	Channel Catfish	American Eel
Brook Trout	Chum Salmon	Anchovy
Haddock	Pacific Halibut	Atlantic Halibut
Northern Pike	Pacific Mackerel	Atlantic Herring
Ocean Perch	Pacific Whiting	Atlantic Salmon
Pacific Cod	Rainbow Trout	Coho Salmon
Rockfish	Red Snapper	King Salmon
Silver Hake	Skipjack Tuna	Lake Trout
Sole	Spot	Pacific Herring
Striped Mullet	Striped Bass	Pink Salmon
Sturgeon	Swordfish	Sardine
Walleye	Thread Herring	Sockeye Salmon
Yellowtail	Turbot	
Yellow Perch		

Amounts based on total EPA and DHA in an approximately 3½ oz. serving.

lesterol levels. *(Nut Reviews 85;43:268)* It decreases the stickiness of blood cells and helps prevent the formation of abnormal clots. It has even been shown to reduce angina pain and reduce the tissue damage associated with strokes and heart attacks. *(Athero 84;50:3) (Prostaglandins 80;20:(6):1021) (Stroke 84;15:(1):65)*

You would think the use of fish oil capsules would become standard procedure, especially since none of the drugs tested have shown to be any help. Unfortunately, not all the previous research studies indicate that fish oil helps, and most of this research has focused on lower dosages (in the 4–10 grams-a-day range), which is not nearly enough to lower triglyceride and cholesterol levels.

Considering all of this, and the high cost of fish oil capsules, I recommend that you simply make it a point to eat fresh broiled, grilled (not fried) fish a few times a week. The best sources of EPA (eicosapentaenoic acid) are the higher-fat fishes like salmon and tuna. For vegetarians, one of the best sources is spirulina, a blue-green algae that can be found in supplement form in health food stores. Flaxseed, which we'll discuss in a moment, also conveys many of same benefits as fish oil.

Flaxseed—The Perfect Food

Flax is one of the oldest cultivated crops. Flaxseed has several properties known to be beneficial in the treatment of high blood pressure, elevated cholesterol and triglycerides, and atherosclerosis (clogging of the arteries). *(Prostaglandins Leukot Essent Fatty Acids 96:54(6):451-5)* In one study, participants with chronic high cholesterol were given three slices of bread containing flaxseed, along with 15 grams of ground flaxseed a day. In only three months, their cholesterol levels were lowered and their tendency to form blood clots had reduced dramatically. *(J Am Coll Nutr 93;12(5):501-4)*

Consuming certain fish oils, particularly EPA, can help lower the risk of developing high blood pressure, heart attack, stroke, and clogged arteries. Flaxseed and flax oil can provide the same benefits as eating fish—at a nominal cost. *(Am J Clin Nutr 94;59(6):1304-9)* Your body can convert the fatty

acid ALA (alpha linoleic acid) found in flax oil into EPA, the beneficial fish oil.

I'm certainly not advocating that you quit eating fish. But it's nice to have an effective and inexpensive alternative, especially for those who really dislike fish.

Flax Oil vs. Flaxseed

Flaxseed is inexpensive, and probably the best way to enjoy all the benefits of flax. It provides fiber, as well as important minerals like magnesium and trace elements. Like most grains, flaxseed stores well in airtight, light-proof plastic containers. Grind the seeds in a coffee grinder just before using them. If seeds aren't crushed, they will pass through your system intact and you won't get the benefits. If you don't consume the ground seeds rather quickly, the precious oils can oxidize and go rancid.

When you consume flaxseed, make certain you drink plenty of water because fiber in flax soaks up water like a sponge. This is great for promoting soft stools and relieving constipation, but without adequate liquids, it can have the opposite effect—constipation. You can find flaxseed at health food stores or order it from Flora, Inc. at 800-446-2110 or *www.florahealth.com*.

What Is Hydrogenation?

For decades, nutritionists, physicians, and health publications have sold the public on the idea that margarine is "heart smart." It's even served in hospitals! Margarine is a product of hydrogenation and is far more dangerous to your health than butter. The fats it contains are not compatible with our body chemistry. They have a higher melting point than body temperature, which allows them to circulate in the bloodstream as a solid fat rather than an oil. Studies from as early as the 1950s have shown that these man-made, hardened oils are dangerous.

During the process of hydrogenation, hydrogen is "bubbled" through liquid oils. The extra hydrogen atoms turn unsaturated liquid oils into saturated fat, producing some pretty strange fat molecules that aren't naturally found in the human food chain. Hydrogenated fats alter the normal production of fatty-like hormones called prostaglandins. Over 100 different varieties of prostaglandins are known to exist, and preliminary studies indicate they have links to blood pressure, free-radical scavenging, transmission of nerve impulses, inflammatory reactions, blood clotting, and even cancer.

These unusual fat molecules also change the melting points of substances. While unrefined, unsaturated fats melt at around 55°F or less, hydrogenated fats won't melt until around 112°F. The fact that they don't smoke or burn at higher temperatures makes them ideal to use in deep frying (ideal for the owner of the fast food franchise and the heart surgeon, that is). They don't absorb flavor from food, so chicken, fish, and onion rings can all be fried in the same grease. And best of all, the customer can't taste any difference when the oil becomes rancid. This last feature makes hydrogenated oils a popular ingredient for cookies and crackers that need a longer shelf life.

By the time a hydrogenated fat reaches your kitchen, it doesn't even resemble the original oil that comes from the seed or nut. It doesn't matter that it depletes your levels of essential fatty acids, leads to faulty cell-wall construction and aberrant nerve tissue formation, and can even cause cardiovascular damage and cancer. All that matters is that it makes for great advertising. If you want to see just how popular hydrogenated oil has become, read processed food labels in your pantry or grocery store. Estimates are that 50 to 75 percent of fats now consumed in the U.S. are hydrogenated.

Coconut and palm oil are two of the most common plant oils touted as cholesterol-free. What advertisers don't tell you is that these oils are almost totally saturated, due to hydrogenation. Steer clear of "hydrogenated" foods. I don't care if they're "cholesterol-free," "fat-free," or just "partially-hydrogenated." They're garbage! Butter is definitely a saturated fat, but it is not hydrogenated. If you're currently using margarine, switch to butter—in moderation. A little pat goes a long way!

If you find that grinding seeds every day is inconvenient, take flax oil. Flaxseed oil is one of the omega-3 oils and is considered to be a super-unsaturated fat. If it is not used readily, it has a tendency to break down and become rancid. Store it in the refrigerator, or in the freezer if you don't intend to use it within four to six weeks. Frozen, the oil will last a year or more. Take a tablespoon of cold-pressed flaxseed oil daily. Drizzling it on salads, bread, or vegetables is one of the quickest and easiest methods of raising linolenic acid levels.

Over the years, I've tried dozens of flax oils. Flora manufactures some of the highest quality, tastiest oil on the market. I can't recommend their product highly enough. Flora Flax Oil can be ordered from Flora, Inc. at the toll-free phone number or web site listed above. It is pesticide- and herbicide-free. During processing, they use very low temperatures, the oil has only limited exposure to air and light, and it is packaged in light-resistant bottles. Unlike many flax oil products on the market, it retains its fresh, nutty taste. Flora stamps each bottle with the processing date. Dispose of oil not used within three months.

Prescription Drugs

Long-term drug therapy is without question the leading "treatment" for pretty much any heart-related problem, including high cholesterol. Regardless of what most physicians and drug companies would like you to believe, we still don't know the long-term effects of these drugs. But we do know that some of the short-term side effects from drugs put millions of people in danger. Let's look at some of the research:

- A class of cholesterol-lowering drugs, statin drugs, interrupt the body's natural production of coenzyme Q10 (CoQ10). In a randomized, double-blind trial, blood levels of CoQ10 were measured in 45 people with high cholesterol treated with lovastatin (20–80 mg per day) or pravastatin (10–40 mg per day) for eighteen weeks. A significant decline in blood levels of CoQ10 was reported with both drugs. Until more is known, people on pravastatin should talk to a nutritionally-oriented doctor about supplementation with 30–100 mg CoQ10 per day.

- One of the most popular cholesterol-lowering drugs, cholestyramine, is linked to a long list of problems. The primary function of cholestyramine is to absorb and excrete bile acids. This leads to numerous gastrointestinal problems. Constipation is the most common complaint among patients, along with nausea and bloating. (These complaints are considered "minor" by most physicians and are therefore overlooked.) This drug also binds and inhibits the absorption of various fat-soluble vitamins like A, K, and D. This can lead to night blindness, prolonged or unusual bleeding and bruising, an increase in triglycerides, and osteoporosis. Finally, this popular drug can also trigger severe reactions when taken with certain families of drugs; i.e., blood thinners, thyroid hormones, and diabetes and heart medications.

A Solid Supplement Foundation—Your Best Weapon Against Heart Disease

Without question, the single best thing you can do for your heart—and your overall health—is to take a comprehensive multi-nutrient every day. By comprehensive, I mean a nutrient that provides the combinations and dosage levels that research has shown bring about positive changes in the body.

A lot of people these days take a select few nutrients—vitamin C, vitamin E, and magnesium, perhaps. This is certainly a step in the right direction, but it neglects the concept of nutrient "synergy"—how nutrients interact with each other to accomplish their tasks. B vitamins are an excellent example. They assist in nearly all metabolic processes, particularly the efficient production of energy (so you burn fat before muscle) and the conversion of fats (so they don't get stored as body fat). If you're deficient in even one, the others cannot do their jobs properly.

Research continues to confirm the necessity for natural nutrient complexes instead of isolated vitamins and nutrients. If you simply pick a few

popular nutrients, you cannot expect to reap their full benefits.

If you currently have any type of cardiovascular problem, including cholesterol, or are at risk of developing such a problem, you should consider the nutrients I am about to discuss.

Niacin

When I discussed the cholesterol-lowering drug cholestyramine earlier, I only mentioned a few of the harmful side effects and didn't include cost. Research has shown you can reduce your total cholesterol (TC) and at the same time raise your high density lipids (HDL—the good fats that protect the body)—for far less than you would spend for cholestyramine! How? With vitamin B3 or niacin!

Niacin is a superficial vasodilator, that is, it opens up blood vessels near the skin. (It is also called nicotinic acid.) A study done at the Beth Israel Hospital in Boston by Dr. James D. Alderman involved 72 patients ranging in age from 38 to 77. All had coronary artery disease or clogged arteries. Thirty-four of the 72 had previously had heart attacks. Each patient was started on 100 mg of niacin daily, and gradually increased so that in 12 weeks each patient was taking 1-2 grams (1,000-2,000 mg) daily.

The dosages had to be increased slowly, because with niacin you can get a flush—a reddening of the face, shoulders, and arms, accompanied by itchiness, which usually lasts for only five to ten minutes. Besides this "side effect," some patients in the study had mild headaches, nausea, diarrhea, and upset stomach. These effects also were only temporary and resolved in all but three patients who were eliminated from the study.

Over a period of ten months in patients who took more than 1,000 mg of niacin a day, total cholesterol (TC) fell by 16 percent, and high-density lipids (HDL) rose by 41 percent! In those who were taking lower dosages (under 1,000 mg a day), the TC fell only five percent and the HDL went up 25 percent.

You should always take a *complete* B-complex vitamin daily if you're going to take any B vitamin by itself. A multivitamin with about 50 mg of each B should be sufficient.

Coenzyme Q10 (CoQ10)

Extensive research supports the use of CoQ10 to promote healthy blood pressure, valve function, cholesterol levels, and other cardiovascular functions. CoQ10 is the ultimate heart protector. It facilitates the production of cellular energy, which is important because your heart is the largest energy-using organ. CoQ10 also offers powerful antioxidant protection.

Unfortunately, the standard dry form of CoQ10 is poorly absorbed in the gastrointestinal tract. That's why it's important to look for a more highly absorbable form of CoQ10. One such form is when CoQ10 is suspended in oil, which helps it pass easily through the intestinal wall into the bloodstream. There is also new technology available that makes the dry form of CoQ10 water-dispersable. From a dosage standpoint, CoQ10 with increased absorption means that a lower dosage is equivalent to a higher dosage of the standard dry form. (It also means you get more nutrient for your money, which is always a good thing.) If you take CoQ10 in a more absorbable form, I recommend 30-250 mg a day depending on the amount of cardiovascular support you need. You can find CoQ10 in health food stores or order it from the Vitamin Shoppe at 800-223-1216.

Vitamin C

Vitamin C is the only antioxidant we are aware of that helps prevent and reverse heart disease. Low levels of vitamin C have been show to have the following effects on the cardiovascular system:

- Increase cholesterol, triglyceride, and LDL levels, decrease HDL levels. *(Advanced Lipid Res. 78;16:167-220)*
- Suppress the conversion of excess blood cholesterol into bile. *(Ann. NY Acad. Sci. 75;258:410-421)*
- Restrict the production of collagen and glycosaminoglycans, two connective tissue components that give structural strength to the walls.

Vitamin C supplementation has been shown to reverse atherosclerotic lesions in animals as well as humans. *(Canadian Med Assoc J 57;77:106) (Canadian Med Assoc J 54;71:562)* Positive results in humans occurred in two to six months on dosages of 1½–3 g of vitamin C daily. Numerous studies have also shown vitamin C supplementation can lower total cholesterol, blood fats, triglyceride levels, and platelet adhesiveness, while at the same time increasing HDL cholesterol. *(Atherosclerosis 82;41:15) (Aliment Nutr Metab 81;2(3):169-182) (Scot Med J 84;29(3):176-182)*

Note: Daily doses of 2 g or more of vitamin C may lower copper levels. *(Am J Clin Nut 83;37:553-556)* Be sure you get at least 2 mg of dietary copper daily when taking higher dosages.

Lecithin

The word lecithin is derived from the Greek word *lekithos* meaning egg yolk, from which the compound was first isolated. I mentioned earlier that egg yolks are an excellent food source for lecithin. Let me briefly explain one of the lifesaving functions of lecithin and its peculiar relationship with cholesterol.

Normal body temperature is 37°C. (This is also 98.6°F as you know, but for consistency I'm going to keep all the temperatures in Celsius or centigrade.) Body temperature is 37°C and cholesterol melts at 149°C. Basically, this means that a hunk of waxy cholesterol stuck in your artery somewhere isn't going to be easy to remove unless it is liquefied. That's where lecithin comes in. A Canadian researcher, F. A. Vanderheuvel, found that cholesterol becomes soluble in the bloodstream only when enough lecithin is present. *(J American Oil Chemist's Society 63:40:464)* This was later confirmed and reported by D. L. Small of Boston University. *(Science 74;155:222)* Once it's soluble, it can be sent to the liver for excretion.

Both fat-protein molecules that transport cholesterol contain lecithin. The fat portion of HDLs has almost twice as much lecithin as the fat portion of LDLs. Fats in HDLs are 53 percent lecithin and 27 percent cholesterol, and in the LDLs are 29 percent lecithin and 45 percent cholesterol. (This helps explain the nicknames "good" for HDL and "bad" for LDL cholesterol—the HDL is much higher in beneficial lecithin.)

The daily use of lecithin is one of the more important steps you can take to protect your heart. It hasn't been endorsed by orthodox medicine or the media for one very simple reason. It's not patentable, so there is no money to be made in promoting it.

I like the granular form of lecithin. It is derived from soy and is a simple, tasty way to get sufficient amounts of this essential nutrient. Mix the granules with juice or another beverage and drink it or sprinkle it on cereal. I recommend lecithin granules manufactured by Bronson™. Look for them in health food stores, or order from Bronson Laboratories at 800-294-5507.

Selenium

Selenium acts as a potent antioxidant and has been shown to directly prevent atherosclerosis. It works best when combined with vitamin E. The RDA for selenium is 70 mcg. Research indicates this is far too low for optimal health. Even worse, the average daily intake in this country is probably somewhere in the neighborhood of 25–50 mcg. Our modern lifestyle tends to increase the need for selenium supplementation. Factors like high alcohol consumption and exposure to substances like cadmium, copper, and lead, which have been found to leach from drinking water pipes, can lower selenium levels.

Because too much selenium can be toxic, the general public hasn't been informed of the importance of maintaining adequate levels of selenium in the body. Doctors and medical professionals, however, are beginning to recommend it to patients. If you are careful and are aware of the symptoms of toxicity, I recommend adding it to your diet. In my experience, a safe, effective daily dose for selenium is 200 mcg. Toxicity is rare, and the warning signs are obvious: a garlic smell of the breath, sweat, or urine; eruptions and yellow tinting of the skin; intestinal problems; kidney or liver impairment; or arthritis.

Citrus Pectin

Until recently, pectin, a type of fiber found in all green land plants, was used mainly to treat constipation. Recently, however, it has been found to help lower serum cholesterol levels, and Dr. James Cerda of the University of Florida has shown that pectin is just as effective as the anti-cholesterol drug cholestyramine. *(Drug Nutr Interact 85;3:109-113)*

Dr. Cerda's animal studies confirmed the safety of pectin and showed it didn't inhibit the absorption of necessary minerals, such as iron. A subsequent study involved 27 patients, ranging in age from 27 to 69, with their total cholesterol readings ranging from 208 to 420 mg/dL. Levels dropped an average of 21 mg/dL after taking pectin—levels of LDL ("bad" cholesterol) averaged 195 mg/dL at the beginning of the study and dropped to an average of 174 mg/dL after the pectin. (HDL or "good" cholesterol levels and the triglyceride levels were unaffected by the pectin.)

To achieve these results, the patients followed a very simple program. Each was given 15 grams of grapefruit pectin a day, 5 grams of pectin with each of their three meals. That was the total program. No other changes were made in diets or lifestyles. Except for the fact that one patient complained of having two or three bowel movements a day instead of one, no side effects were noted.

Based on studies like this, my first suggestion would be to *regularly* add pectin and fiber to your diet. A good source of apple pectin and guar gum is Freeda Vitamins Inc., 800-777-3737 (mention that you are an *Alternatives* subscriber and receive a 20 percent discount). Another product, Profibe (CerBurg Enterprises, 386-761-8100), contains 25 percent pectin and 75 percent guar gum.

Exercise

Every single day of your life, you need to do something that specifically makes your heart work harder and beat faster. Not only does exercise strengthen heart muscle, it causes blood vessels to dilate and expand. If you can expand these blood vessels every day, they'll retain their elasticity. If you're sedentary, they'll become rigid and hard. Then, when you need to call upon them (like during a stressful situation), they won't be able to do their job. And that's when heart attacks strike.

The only "rule" regarding effective exercise is that you must get your heart pumping. For real cardiovascular benefits, you have to increase your pulse rate up from its normal working rate and keep it up long enough for the blood vessels to dilate.

Almost any exercise can be beneficial—walking, swimming, riding a bike, jogging in place. It doesn't have to be for a long or intense period of time, but it needs to be on a regular basis. In fact, occasional "Iron Man" strenuous workouts are far less effective than simply walking each day.

In one study, climbing 50 or more steps a day (at one time) reduced heart disease by 20 percent. Walking as little as five or more blocks a day reduced it by 21 percent, and regular vigorous sports activity dropped the risk 27 percent. In another study of 30 men, walking as little as 20 minutes daily showed positive LDL reductions.

Concentrate on activities that are simple and inexpensive, and don't require excessive travel. If you're able, take the stairs instead of an elevator. Taking a vigorous walk is a good, if not the best, form of exercise for you. Above all, turn off the computer and TV set and get out there and do something!

The Danger of Inflammation

Lately, the buzz phrase in cardiac medicine has been C-reactive protein (CRP). At the risk of oversimplifying matters, CRP is a blood "marker" that indicates inflammation is occurring somewhere in the body. And inflammation is known to damage arterial walls and lead to such problems as arteriosclerosis, heart disease, heart attack, and stroke.

According to a study published in the *New England Journal of Medicine*, the highly sensitive C-Reactive Protein Test (hs-CRP) is more predictive of future heart attacks and strokes than a standard cholesterol test.

Statins, traditionally used to lower cholesterol, can lower CRP in the body. Some doctors even feel that the best way to prevent

heart disease is to prescribe broad-spectrum antibiotics to knock out any infections and their resulting inflammation. Several magazine articles have called this a breakthrough and a sure-fire method to rid society of heart disease. Again, these approaches treat the symptom and not the cause. Unless it is absolutely necessary, I can't see why anyone would want to take any drug for a lifetime.

Unfortunately, doctors in this country prescribe many different medications without regard to their cumulative effect on a patient's health. Even if there were an interest in keeping up with the potential side effects of all the medications, it's practically impossible for even a well-trained and thoughtful doctor to do so. The average patient doesn't stand a chance.

You Can Lower CRP Naturally

Drugs are not the only answer for elevated CRP. With small lifestyle and diet changes, and some targeted supplementation, you can lower CRP without the potential side effects often associated with drugs. You can start by following some of my recommendations outlined earlier in this report, including exercise and intake of essential fatty acids (fish, fish oil, flaxseed oil, etc.).

Other food sources of omega-3 fatty acids are spinach, mustard greens, walnuts and walnut oil, wheat germ oil, grapeseed oil (canola), soybean lecithin, tofu, beans, buttermilk, pumpkin seeds, and seaweed. Black currant seed oil capsules, borage oil capsules, and evening primrose oil capsules, also good EFA sources, can be found in health food stores.

Hear are some other supplements that act as natural COX-2 inhibitors—fighting inflammation and lowering CRP in the body.

Curcumin (the yellow pigment of the spice turmeric): There are literally hundreds of studies that have shown that turmeric is a powerful COX-2 inhibitor. Additionally, even small doses of turmeric can reduce harmful cholesterol levels, protect against cancer, and provide strong antioxidant properties.

CRP and Periodontal Disease

Dozens of studies have shown that in many cases CRP can be directly linked to periodontal disease. And once the disease is addressed, the CRP levels subside. Researchers at the University of North Carolina reported that 85 percent of heart attack patients have periodontal disease, compared to only 25 percent of individuals who haven't had a heart attack. *(BMC Infect Dis 02;2(1):20) (AMJ Med 02;113(6): 462-7) (J Periodontol 01;72(9):1221-7)*

If you have periodontal disease, you're setting yourself up for a future stroke or heart attack. The presence of periodontal disease may be as important as high blood pressure, elevated cholesterol levels, smoking, or family history as a risk factor for death due to heart disease or stroke. *(Ann Periodontol 01;6(1):20-9) (Ann Periodontol 98;3(1):127-4) (Curr Opin Periodontol 97;4:21-8) (Compendium 94;15(8):976,978-82,985-6)*

The simple act of substituting xylitol for sugar in your diet can be a crucial step in preventing or eliminating gum disease, tooth loss, asthma, inner ear infections, chronic throat and sinus conditions, osteoporosis, and cardiovascular disease. Studies have shown that xylitol makes it hard for pathogenic bacteria to attach and "set up house" in the oral cavities. Also, the bacteria that remain attached ingest the xylitol and, over time, mutate to become less and less pathogenic.

Xylitol-sweetened gums and mints are good ways to benefit from this "friendly" sugar. But buying it in bulk will be the most cost-effective way. A good supplier is XylitolNow, phone 619-445-2689. *Note*: You may get voice mail when you call asking you to leave a short message and the best time to call you back, including your time zone. You can also visit *www.xylitolnow.com/alt.html*.

I believe that regular daily doses of turmeric are essential. If your multi-vitamin supplement doesn't contain turmeric, I would certainly recommend that you add it to your daily supplements. I recommend between 500–1,500 mg daily.

Green Tea: In one study, those who consumed four or more 4-ounce servings per day of green tea cut their risk of heart disease in half, compared to those who drank little or no tea. One of the components of green tea is salicylic acid. Aspirin is acetyl salicylic acid. Unlike aspirin, however, green tea contains dozens of other compounds that work together not only to inhibit the COX-2 enzyme, but also to negate any of the potential side effects that might come from long-term use of individual compounds like salicylic acid.

Green tea is readily available in grocery stores. If you don't like it or it's not convenient to brew several cups throughout the day, take green tea extract. I recommend about 50 mg per day.

Rosemary: This is another herb that has shown strong COX-2 inhibition properties. It also has strong antioxidant properties.

Quercetin: This bioflavonioid has been shown to cut the risk of coronary heart disease. Quercetin is found at higher levels in grapefruit (particularly the white pulp portion), onions, apples, broccoli, shallots, and summer squash. It can also be extracted from the quercitron oak tree, the eucalyptus tree, and some forms of blue-green algae. I'm always in favor of getting essential nutrients from the diet whenever possible. Quercetin is no exception. But, for someone already suffering from heart disease, taking extra quercetin in supplement form is often necessary. I recommend 50–150 mg of quercetin a day.

Real Help for Stroke-Damaged Limbs

We've all seen the horrible damage that can result from a stroke. The paralysis associated with stroke can be so destructive. Speech can be lost. The ability to walk and/or the use of a hand or arm may be gone almost instantly.

If you or someone you know has suffered from a stroke, you need to be aware of an amazing new therapy called Constraint-Induced (CI) Movement Therapy. It doesn't require surgery or drugs, and could literally change your life in a matter of just a couple of weeks.

When the nerve supply to an area like the arm is first damaged, an individual will still initially try to use that limb. Unfortunately, they are unable to do so. As they continue to try, failure leads to pain, dropping objects, and other frustrating and negative outcomes. These failures can be equated with punishment, and, as you might know from being spanked as a child or from well-documented learning experiments, punishment results in the suppression of behavior. In effect, immediately following an accident, the brain learns that it is not supposed to use the affected limb. Even when there is still a nerve connection to the area, or the brain can recruit other areas to supply the limb, it has learned not to use that limb.

Dr. Edward Taub of the University of Alabama developed CI therapy as a method of helping the brain overcome "learned nonuse." Additionally, in stroke cases where one side of the brain incurs damage, CI therapy helps recruit the undamaged opposite side of the brain, which will then begin to control the affected limb. Numerous complex experiments over the last fifty years lend support to the idea that the brain can re-route various functions to different parts of the brain. CI therapy appears to speed up the process dramatically. What could take 10 years to accomplish with conventional therapy often takes only 2 to 3 weeks using CI therapy.

Necessity Is the Mother of Rehabilitation

CI Therapy is pretty straightforward. Most of the initial work with it so far has involved the rehabilitation of the hand and arm. The normal-functioning arm is restrained in various ways (sling, protective mitt, etc.) to keep the individual from using it for 90 percent of their waking hours for a period of 2 to 3 weeks. The affected arm is then given very structured, repetitive training for 6 hours interspersed with an hour of rest, each weekday, over the 2- to 3-week period. Training might consist of such activities as food

Miracle in a Flask with a Cuppa Joe

Studies indicate that stroke damage can be reduced by as much as 80 percent when an experimental drug called Caffeinol is administered within two hours of a stroke. *(Stroke 03;34:1246)*

Based on the content and dosages of the drug (Caffeinol is primarily a combination of caffeine and alcohol), similar protection could be achieved by consuming two or three cups of strong coffee and a cocktail. It seems the ideal drink to have within two or three hours of the onset of a stroke would be an Irish coffee. Although this may seem a little strange, I'm very serious about the Irish coffee. I am not a coffee drinker, but in this case, I would make an exception.

Just so you have it in one place, here are the directions for making Irish coffee in the event it ever becomes necessary. Obviously, the sugar and whipped cream would not be used in an emergency.

Traditional Irish Coffee

2 cups strong black coffee

1 Tbsp. sugar

2 oz. Irish whiskey

Stir well; top with whipped cream

There are a couple of other important points from this study. Taking alcohol alone actually made the stroke damage worse. The alcohol has to be combined with caffeine. The exact dosages haven't been established, but what I've suggested is close enough that we know it works. Also, the treatment didn't appear to work as well in the animals when they were exposed to alcohol on a daily basis. However, the daily consumption of caffeine didn't appear to limit the effectiveness when the two were given together following an induced stroke.

Alcohol opens up blood vessels, and caffeine is known to increase blood flow. Both exert their effects quickly, and together they appear to be an excellent combination to prevent stroke damage.

preparation, gardening, shopping, dining, games, hobbies, etc.

It has been so successful that patients with lower limb problems due to stroke are now being treated successfully. Initial reports show that coordination has been improved significantly and many of those who couldn't walk without assistance are now totally independent or need only minimal assistance after just 3 weeks of treatment.

Conventional stroke therapy also uses very structured, repetitive training to the affected limb; but without constraining the opposite, unaffected limb, the end results are very different. Instead of resulting in a positive learning experience for the brain and an actual reorganization of the nervous tissue in the brain, structured, repetitive training on its own has only a neutral or negative effect on the learning process. *(Schmidt, RA. Motor control and learning. 2nd ed. Champaign, IL: Human Kinetics; 1998)*

CI therapy has also been used on patients with other ambulatory problems resulting from fractured hips, etc., and again the results have been amazing. Two such patients reported having to constantly use a wheelchair and never being able to walk over 5 feet before the CI therapy. At the end of the treatment, both were less dependent on their wheelchairs, and one was able to walk 103 feet and the other 78 feet in a three-minute walk test. *(J Gerontol 96;51A (4):M147-51)*

Another woman still had to use a cane and couldn't go up or down stairs following her hip surgery two years earlier. At the end of 3 weeks of treatment, she only occasionally used her cane and was able to negotiate stairs without any problem.

One interesting study using a variation of CI therapy involved ten professional musicians (seven pianists and three guitarists) suffering from chronic focal hand dystonia. This is a condition where one loses coordination within the hand resulting from extensive and forceful use of the fingers. These individuals underwent therapy for from 8 to 14 days, and then were given exercises to practice at home. At the end of the therapy period, half had returned to their normal activities. Four of the patients had been forced to stop playing

their instruments, but were able to resume performing after the treatment. *(Lancet 99;353:42)*

Theory, Schmeory; It Works

Very sophisticated brain mapping procedures, using transcranial magnetic stimulation (TMS), electrical source imaging (ESI), and magnetic source imaging (MSI), have shown that CI therapy "jump-starts" the healing process and the reorganization of nervous tissue in the brain, which continues for months following the initial 2- to 3-week treatment period. *(Neurosci Lett 98;250:5-8) (Neuroreport 99;10:807-10)*

A Work in Progress

Unfortunately, since CI therapy is so new, I don't think most insurance companies cover the treatment. And although it will undoubtedly catch on quickly once the medical profession learns how effective it can be, there aren't too many places where it is currently available.

Dr. Taub does his research and operates a CI therapy clinic at the University of Alabama in Birmingham, Alabama. The clinic takes patients, but you have to be able to travel there and stay during the 2 to 3 weeks of treatment. They are currently treating individuals with chronic or recent stroke damage and head injuries. For an information package, you can call 866-554-8282 or visit *www.taubtherapy.com*.

At the risk of oversimplifying matters, with CI therapy we now have a way of rewiring the brain. What's so amazing is that the process can be started so quickly. It doesn't require surgery or drugs, and it seems to work even though the injury to the brain may have occurred years ago. It's truly a remarkable therapy. Pass along the word. It's something that can change the lives of hundreds of thousands of individuals.

Alternatives®
FOR THE HEALTH-CONSCIOUS INDIVIDUAL
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When Good Guts Go Bad

Dr. David G. Williams
circa 1985

Dear Reader,

As I began writing to you this month I was pulled away by the horrible events in Louisiana, Mississippi, and Alabama. They are a reminder that the unexpected can undo your life in ways more drastic than you can imagine—so it's best to be prepared. My thoughts and prayers are with all those people along the Gulf Coast who have suffered from the effects of Hurricane Katrina. Now, on to this month's letter.

It's estimated that somewhere between 10 and 20 percent of the US population suffers from the condition called irritable bowel syndrome (IBS). Unfortunately, an estimated 70 percent of the people with IBS don't seek any medical attention. Still, the condition prompts 40 percent of all referrals to gastroenterologists, and is their most commonly made diagnosis. *(Gastroenterology 02;123:2108–2131)* I've discussed IBS in bits and pieces in the past, but it's time to revisit the problem in light of some comprehensive therapies I've uncovered.

Being able to diagnose IBS still seems to be a problem for most doctors. The medical profession is more comfortable with diseases that present a consistent set of symptoms. However, roughly a third of those who suffer from IBS experience diarrhea, another third have constipation problems, and the remaining third alternate between the two.

If you have the problem, you likely experience abdominal pain or discomfort that is:

- relieved with defecation,
- associated with a change in frequency of stool, or
- associated with a change in the form or appearance of the stool.

Other symptoms also support a diagnosis of IBS:

- abnormal stool formation—either hard and lumpy or loose and watery,
- abnormal stool frequency—either more than three bowel movements a day or fewer than three a week,
- abnormal stool passage—straining, extreme urgency (in the case of diarrhea), or the feeling of not being able to completely evacuate,
- passage of mucus in the stool, or
- bloating or the feeling of bloating.

Several factors can trigger or contribute to the development of IBS.

Antibiotic Use

For many people IBS first shows up after an infection (often one in the gastrointestinal tract), particularly when a long course of treatment or potent antibiotics have been used to address the infection. Antibiotics disrupt the normal bacterial flora in the gut, and this imbalance can lead to IBS.

Food Intolerance

Intolerance to certain foods is one of the primary triggers of IBS. Many people incorrectly

20th Anniversary

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You will observe with concern how long a useful truth may be known, and exist, before it is generally received and practiced on.—Benjamin Franklin

While commercial supplements are the first thought that comes to mind when you mention probiotics, naturally fermented, "live" foods have been around since the beginning of mankind. Fermented vegetables, fermented milk products (clabber, yogurt, cheese, buttermilk), kefir, fermented soy products (natto, miso, tempeh, soy sauce, fermented tofu), and even naturally fermented, unpasteurized beers are some of the most complete probiotics available. I highly recommend you include foods like these regularly in your diet.

My favorite fermented food (besides unpasteurized beer, of course) is homemade sauerkraut. I keep a fresh batch going almost constantly, and some already made in the fridge at all times. It provides one of the widest varieties of beneficial bacteria that are known to protect against everything from bowel troubles to cancer. It's inexpensive and easy to make and keep. A little salt, cabbage, and a crock are all that's needed.

During those times when you're not home or don't have access to homemade sauerkraut or other fermented foods, I recommend the use of a commercial probiotic product. Look for one that can maintain viability without refrigeration, available in health food stores and over the Internet.

If, for some reason, you can't take any of the fermented foods I've mentioned, I would recommend trying the product called Lactic Acid Yeast Wafers from Standard Process Laboratories. A couple of wafers with each meal will start to work wonders at re-establishing the friendly flora in the bowel. The product is generally sold only through doctors, so you'll have to check for someone who handles the product in your area (chiropractors are a good source)—or you can search the Internet for suppliers such as *www.CostLessSupplements.com* at 800-578-5939.

I would venture to say that adding probiotics to the diet (and eliminating products that contain HFCS) would eliminate 75 to 80 percent of all cases of IBS, maybe even more.

Beyond the Basics for In-Depth Help

When a probiotic won't do the trick by itself, you'll have to get more strict with your diet. I would first try eliminating all foods with gluten—wheat, barley, and rye products. A gluten allergy is sometimes called celiac disease *(see Vol. 10, No. 11)*.

In addition to eliminating gluten, you might want to try an elimination diet (much like the one I mentioned earlier in this article) to see if your IBS or bowel problems are linked to an intolerance of a particular food or foods that could be eliminated from your diet and re-introduced later.

The next step is more involved, and could be referred to as the "weed and feed" program. The idea is to first cleanse the bowels of any harmful or large numbers of undesirable bacteria, fungi, yeast, and parasites; heal any damage that has taken place; and then re-establish a healthy population of beneficial bacteria. Overall it's roughly a two-week program that begins with a 24-hour fast, where ideally nothing would be consumed except purified water. (Chlorinated water is not recommended, because it is not particular about which bacteria it kills—even the beneficial types in the bowel.) If one can't fast on water alone for 24 hours, a homemade vegetable broth or the low-sodium version of V8 juice can be included, but under no circumstances should you add any fruit, juices, or other foods or drinks.

After the first 24 hours, steamed vegetables and light salads can be gradually added to the diet. (Yeast products, sugar, and starchy foods such as potatoes and rice are not allowed.) Days 2 and 3 begin the "weeding" of your colon as "broad spectrum" natural antimicrobials are added to the regimen. The standard antimicrobial is garlic, preferably fresh—which has been proven effective against eliminating an extremely wide variety of harmful bacteria, fungi, yeast, and viruses while at the same time sparing the beneficial forms of bacteria. You can achieve these effects by simply consuming two crushed garlic cloves twice daily with your meals.

(Some medical advisors recommend the use of enteric-coated garlic tablets. The reasoning is the garlic will pass through the stomach undigested, for release in the bowel where it can be more effective. I have concerns about this product because some studies suggest the enteric-coated form can be very irritating and destructive to the bowel wall. Thus, I would recommend sticking to fresh garlic. *[J Nutr 01;131:10109S–10113S]*)

Other natural antimicrobials can be used either in conjunction with garlic or by themselves during Days 2 and 3. One that I've had success with is food-grade hydrogen peroxide, which can be taken three times a day as two drops of 3 percent hydrogen peroxide mixed with eight ounces of purified or distilled water. (You need to be very careful with hydrogen peroxide. The 35 percent strength is

extremely caustic, and will cause serious burns to the skin, eyes, or mucous membranes. Stick with the 3 percent food-grade variety.)

Beginning on Day 4, and through the remaining two weeks, you need to heal any damage to the bowel and re-establish the growth and dominance of the beneficial bacteria. In addition to adding specific supplements (such as a good probiotic), you can now gradually begin to introduce more and more fresh foods into your diet.

Coming Back to Life

During this period it is important not to consume sugar, alcohol, caffeine, wheat products, or high starch foods such as bread, potatoes, and rice. Steamed or stir-fried vegetables are highly recommended—particularly high-sulfur foods such as cabbage, broccoli, bok choy, Brussels sprouts, cauliflower, cress, kale, mustard, radish, and turnip. Cabbage is one of the most researched (and also one of my favorites)—steamed, stir-fried, or fermented as sauerkraut. Onions, asparagus, and artichokes are also good choices. Legumes (beans and peas) may also be introduced. Keep in mind, too, that these last few items are higher in fiber—which will be beneficial for IBS and other bowel problems, but may need to be introduced later if diarrhea is an issue. The timing of when and how much can be eaten will vary from individual to individual.

Meat can also be gradually added (begin with chicken, fish, or lamb), and it is generally easier and best to do so in the form of broths, stews, or soups. Slow-cooked (not instant) oatmeal is a good addition at this point. Dairy products may also be included. Again start with the fermented ones first (such as yogurt). (A large percentage of the population has difficulty breaking down the lactose sugar in milk. For those individuals, ingesting milk can result in indigestion, diarrhea, or constipation. After age 15, many people lose the ability to produce the necessary enzyme called lactase. If that's your situation, you can buy lactose-free milk or add a couple of drops of lactase to regular milk. LACTAID is the best-known lactase product and can be found in most drugstores or by calling 800-LAC-TAID.)

As you begin to re-introduce different foods, be alert to any changes in bowel symptoms. You may have to discontinue certain foods and add them back later when your bowels are in better shape.

Helpful Additions

During this period, it's also important to include items that will help heal any damage to the mucosal lining of the bowels. One of the most time-tested products is slippery elm powder—a favorite topical remedy of Native Americans for wounds, burns, and boils. It was also used internally for ulcers and to soothe an irritated intestinal system. Slippery elm is very safe, and it's actually a very nutritious product—particularly for debilitated individuals and babies. (Two useful side notes about slippery elm: It will often provide instant relief from acid reflux; and when mixed with a banana and powdered marshmallow—the herb, not the candy—it can effectively stop diarrhea.)

You can purchase slippery elm in bulk or in capsules (I prefer the bulk product) in most health food stores or from companies such as Penn Herb, 10601 Decatur Road, Suite 2, Philadelphia, Pennsylvania 19154 at 800-523-9971 or on the Web at *www.PennHerb.com*, or from Kalyx.com, P.O. Box 417, Camden, New York 13316 at 315-245-3000 or from their Web site at *www.Kalyx.com*. They both sell a pound of slippery elm inner bark powder for just under $40.

The slippery elm drink can be made by adding a heaping teaspoon of the powder to a little cold water to make a paste, and then pouring on a cup of boiling water while constantly stirring the mixture. Let it cool and then drink it, three times a day. For a slight variation you can use boiling milk instead of water and flavor the mixture with cinnamon or nutmeg. (If you ever want to use slippery elm as a poultice or to treat boils, wounds, et cetera, just make the initial paste.)

If you take slippery elm, I suggest 2 capsules (400 or 500 mg each) three or four times daily.

An alternative to slippery elm is a product called Sialex from Ecological Formulas. It contains a extract of mucin (the main component of mucus) that re-establishes the protective mucus layer in the bowel and provides a lubricating action. You shouldn't need Sialex if you use slippery elm, but I wanted you to know about it because it is helpful in healing the most stubborn cases, particularly ulcerations in the stomach and small intestine. The recommended dosage is 1 to 3 capsules with meals. It can be purchased on the Web from *www.Netriceuticals.com* at 3225 S. McLeod Drive, Suite 100, Las Vegas, Nevada 89121 or call 888-852-4993.

The Test of Time

Tip from Vol. 3, December 1990 20th Anniversary

Here in the U.S., we're often quick to embrace home remedies. Just as quickly, however, we tend to dismiss remedies from other cultures—even remedies that have been used successfully for thousands of years.

Green and black teas are good examples of this shortsightedness. They contain compounds called catechins, bioflavonoids that are currently being underutilized. Like many other bioflavonoids, they have been used successfully to treat liver diseases, especially hepatitis.

Catechins have been particularly effective in patients with food allergies. By blocking the formation of histamine in the stomach tissue, the administration of catechin before meals can very often prevent allergic reactions and urticaria (skin wheals or hives). (*Acta Pharm (Suppl.) 80;313:23*)

Catechins also have strong antiviral effects, particularly against the herpes simplex virus. (*Prog Clin Biol Res 86;213:521–536*) Thorne Research is one of the few places selling straight catechin products, and they sell only to licensed physicians. There are other ways however, that you can increase the amount of catechins in your diet.

The green and black teas common to Asia and India contain as many as four different catechins. Furthermore, researchers in Japan, France, Russia, and Canada have reported that these same catechins work as powerful antioxidants. As such, they have been using them medicinally to protect against blood vessel damage and to suppress cancer. *(Mutation Res 85;150:127–132) (Annual Report of Shizuoka Women's College 81;29:49–93) (Chem Pharm Bull 84;32(5):2011–2014)*

Maybe it's time we discovered why these common drinks can produce relaxation, drop blood pressure, lower blood sugar, protect against heart disease, decrease harmful blood fats, prevent cancer, and even lengthen lifespans.

In addition to the slippery elm, now would be a good time to begin drinking green tea. I've expounded on the many benefits of green tea for years. (*Editor's note: see "The Test of Time" above.*) However, most people still don't realize that green tea can have a very positive effect on the bowel flora. Not only does it have antimicrobial properties and inhibit the growth of many pathogenic bacteria, it encourages growth of the beneficial lactobacilli bacteria at the same time.

The Diet of Last Resort

Rarely does someone not see significant improvement or resolution of their bowel problems during this two-week weed-and-feed period. In some cases it might be necessary to repeat the protocol for another cycle. If your bowel problems haven't resolved following any of the above suggestions, there's another program that I have found to be very helpful. I'll admit it takes far more discipline and a continuing commitment, but it will work.

The program is called the Specific Carbohydrate Diet, developed by Dr. Sidney Haas and described in his book, *The Management of Celiac Disease.* It was then refined in the 1950s by a woman named Elaine Gottschall to help her young daughter, who suffered from severe chronic ulcerative colitis.

In her search for a way to save her daughter, Elaine met Dr. Haas when he was 92 years old, after learning that he had developed a nutritional approach for healing the intestines. At that time, very few doctors felt diet had anything to do with ulcerative colitis, and the only treatments offered were drugs and surgery. After years of medical failures and continuous searching for alternatives, Elaine decided to place her daughter on Dr. Haas's program. Almost immediately they began to see a dramatic improvement in her daughter.

Unfortunately, Dr. Haas passed away two years later, but Elaine continued to refine and successfully use his program. After Dr. Haas' death she feared his research and work would follow him to his grave—and deprive thousands of suffering people of a cure. She decided that she would spread the word to other doctors and suffering patients, but she would have to further her education to develop credibility. She subsequently started college at age 47 and earned degrees in biology, nutritional biochemistry, and cellular biology—all in an effort to better understand Dr. Haas' findings and research.

After her daughter was saved by the diet, Elaine wrote *Breaking the Vicious Cycle* (now in its 11th printing), which explains the program in detail, presents the scientific rationale, and outlines which foods are "legal" and which are "illegal" in the diet. The program from her book has been a godsend to thousands, and I've recommended it for years.

The diet is based on foods that people ate before agriculture began, when complex sugars, additives, refined grains, and breads weren't available. These complex carbohydrates are difficult to digest and when they reach the intestines in an undigested state they, in turn, feed harmful bacteria and allow them to flourish—creating byproducts that inflame and damage the intestinal walls. The Specific Carbohydrate Diet starves the harmful bacterial and helps restore the balance of bacterial flora in the gut.

Her program involves some significant changes in the way most people eat but the results speak for its success. Some of her recommendations conflict with what I've suggested above. For example, she feels slippery elm and other mucilaginous herbs contain starches that feed pathogens in the bowels. Most of what I've recommended, however, doesn't conflict with her program. As I said before, if the regimen and program I first outlined doesn't work for you then I highly recommend following the Specific Carbohydrate Diet.

You can find her book in stores, online at Amazon.com, or from the publisher: Kirkton Press Ltd. in Canada at 905-349-3443. She also has a Web site filled with information and links to support groups along with the list of "legal" and "illegal" foods. If you don't have Internet access, ask your local librarian to access the site for you at *www.BreakingTheViciousCycle.info.* There are several other support groups linked to her site that will be very helpful. One such site is at *www.SCDiet.org.*

When Your Gut Gets on Your Nerves

There's another point you should be aware of that doesn't receive much attention in most medical circles. It's the connection between bowel problems and the nervous system. If you read many of the testimonials concerning the Specific Carbohydrate Diet, you'll find that many individuals have seen a dramatic improvement or even complete reversal in such problems as schizophrenia. The same is true when bowel problems are corrected with probiotics or any of the other programs I've outlined here.

Generally, those in conventional medical circles haven't been able to grasp the connection between toxins in the bowels and neurological disease. (Most still believe the cause of IBS, ulcerative colitis, and similar bowel problems is totally unknown.)

Between 60 and 70 percent of our immune system is located in the digestive tract, which makes sense when you realize it's one of only three direct connections our body has to the outside world (our skin and respiratory tract are the others)—making it one of the places we are most exposed and vulnerable.

A breach in the gut wall—common in individuals with IBS, Crohn's, IBD, and chronic constipation or diarrhea—is commonly referred to as "leaky-gut" syndrome. This state allows toxins, bacteria, yeast, fungi, viruses, and incompletely digested foods to enter the bloodstream. An excess of these pathogens creates additional acids, fermentation byproducts, waste, and toxins that eventually overcomes our gut's defenses.

Although much of my focus has been on IBS, maintaining bowel health is vitally important to everyone. It's one of the most effective methods of improving your overall immune function. It can help prevent or reverse many of the neurological diseases on the rise in both children and adults.

Once these toxins and other particles breach our body's protective barriers, they cause inflammation throughout the body and can often cross the blood/brain barrier where they then interfere with the circulation and flow of nutrients to the brain—which in turn impairs consciousness, speech, cognition, and behavior. It shouldn't come as any surprise that digestive and bowel problems are one of the principal complaints of people of all ages with depression, "brain fog," irritability, schizophrenia, and seizures—even children with autism. It also should be no surprise to see these problems resolved when the bowel problems are corrected. If you or your loved ones suffer from one of these neurological problems, restoring the bowels to normal is one thing you don't want to overlook.

The use of probiotics is preventive medicine at its best. For this very reason it's important to constantly replenish your body's supply of these important life-sustaining organisms, which you can do easily with a daily probiotic supplement. And to that you can add my favorite—a nice daily helping of homemade sauerkraut, washed down with some living, unpasteurized beer from your local microbrewery.

Weight Loss Saboteur

Everyone alive today is participating in one of the greatest health experiments in human history, whether they choose to or not.

As I've said previously, there have been more changes to our food supply in just the last few decades than in all of history. Some changes certainly seem to be significant improvements, but the jury is still out (and may be out for decades) on the ultimate consequences of others.

The entire matter is further complicated by the fact that so many changes are occurring at the same time. Food processing techniques are changing constantly. Chemical additives are being incorporated to improve shelf-life, enhance color, perfect texture (known in the trade as "mouth-feel"), and enrich flavors. Additionally, new artificial sweeteners are introduced to the marketplace every few years and are quickly blended with natural sweeteners or used alone in everything from soft drinks to pancake batter.

Even if someone wanted to track the long-term safety of one of these compounds, it would be almost impossible because of all the other components and processing factors taking place. And it boggles the mind to even consider the idea that combining these different additives, preservatives, artificial colors and sweeteners, et cetera, might have a separate, cumulative effect.

Getting Garbled Messages

Just as we've done with over-the-counter and prescription medicines, we seem to have taken a shortsighted approach when it comes to our food supply. These changes are implemented and assumed to be safe if they don't cause any immediate, obvious problems. Unfortunately, though, we often don't discover the ill effects until years later—after the damage has been done (much the same as with many of the drugs so commonly prescribed).

I've touched on one of these additives/sweeteners in the past: high-fructose corn syrup (HFCS). The introduction and widespread use of HFCS follows the trend we've been seeing of increased obesity and cases of diabetes. The more research that becomes available on this sweetener, the more dangerous it seems to be.

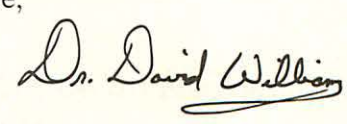
Introduced to the US market in 1966, HFCS is now the number-one sweetener in this country with sales of over $4.5 *billion* dollars a year. The average American consumes over 62 pounds of HFCS a year. And your body processes it much differently than it does common sugar.

When sugar is ingested the pancreas releases insulin, which helps move the sugar from the bloodstream into cells. The insulin also causes fat cells to release the compound leptin, which results in the feeling of "fullness" and, at the same time, prevents the release of a compound from the stomach called ghrelin which makes a person feel hungry. Fructose doesn't trigger the release of leptin from fat cells, or suppress the release of ghrelin.

Additionally, fructose, more so than glucose, is converted by the liver into triglycerides. High triglyceride levels tend to increase levels of LDL cholesterol (the harmful form) and lower levels of HDL cholesterol (the beneficial form). In simple terms, consuming foods and drinks with HFCS increases your hunger, causes you to eat more than you normally would, and raises your risk of heart disease.

You'll have to be somewhat of a detective to eliminate HFCS from your diet. Obviously sodas and other sweetened drinks will contain this sweetener, but it is also found in ketchup, relish, cookies, applesauce, sweetened yogurts, breakfast cereals, jelly, syrups, baked goods, fruits, desserts, and hundreds of other foods.

Take Care,



If you have questions or comments for Dr. Williams, please send them to the mail or e-mail addresses listed to the right. Of course, practical and ethical constraints prevent him from answering personal medical questions by mail or e-mail, but he'll answer as many as he can in the Mailbox section of *Alternatives*. For our part, we'll do our best to direct you to his issues, reports, and products related to the subject of your interest.

Here's how you can reach us:

- For Customer Service matters such as address changes, call **800-527-3044** or write to **custsvc@drdavidwilliams.com**.
- To order nutritional supplements from Mountain Home Nutritionals (MHN), call 800-888-1415 or visit **drdavidwilliams.com**.
- If you are a licensed health professional and would like to learn how to begin reselling MHN supplements to your patients, please send an e-mail to practitionerinquiries@davidwilliamsmail.com.
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FOR THE HEALTH-CONSCIOUS INDIVIDUAL

Dr. David G. Williams

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The Missing Link to Total Wellness

One of the biggest problems with medical treatment these days is that too many physicians look at the human body as a collection of unrelated parts rather than as an indivisible, integrated organism. Very little, if any, consideration is given to the fact that all the systems in the body are intertwined and dependent in both function and structure. This accounts for and perpetuates needless suffering by millions of people.

Obtaining an accurate diagnosis is one of the most important and difficult steps in treating any health problem. If a doctor doesn't know exactly what the problem is, he/she ends up prescribing treatment that deals only with the symptoms, and the condition never gets any better. Understanding the problems comes only when physicians look at how the various parts of the body work together to create harmony and good health.

In this report I will talk about "missing links" to total wellness. I call them missing links because they are triggers that cause illness and disease, but they are too often overlooked when conventional medicine looks for ways to treat many health conditions.

A Simple Activity to Help Prevent Arthritis, Osteoporosis, and Other Diseases

Hundreds of thousands of people have suffered needlessly from osteoporosis, rheumatoid arthritis, hip and spinal fractures, loss of hearing, cataracts, prostate and colon cancer, skin conditions like psoriasis, heart disease, and even multiple sclerosis. I say needlessly because these conditions have been caused by a simple nutrient deficiency due to misguided fears about its source: Vitamin D, which comes from the sun.

A Harvard Medical School study of 290 patients at Massachusetts General Hospital revealed that 40 percent of the U.S. population may be deficient in vitamin D. During the 1994 study, vitamin D levels of patients were checked in March when vitamin D levels are typically their lowest, and in September when they are highest. Fifty-seven percent of the patients had insufficient vitamin D levels; 22 percent had severe deficiencies. *(NEJM 98;338(12):777-783.)*

Many of the patients consumed vitamin D-rich foods and were taking supplements, but something was causing this deficiency. I'm pretty certain the *missing link* was inadequate sun exposure. Popular thinking is that the sun is your worst enemy and that you shouldn't venture out without first slathering your skin with high SPF sunscreen and making sure your head, arms, legs, and feet are covered.

The body makes vitamin D only if skin is exposed to sunlight. Yet, today we are obsessed with avoiding the sun and using sunscreens that block the natural conversion of cholesterol

to vitamin D. Even sunscreens with a low Skin Protection Factor (SPF) rating shield you from the rays needed for vitamin D production. A sunscreen with a SPF of 8, for example, will block 95 percent of vitamin D production, and sunscreens with higher SPFs can block all production.

Simple Ways to Increase Vitamin D Levels

- Ask your doctor to test your vitamin D levels, especially if you are over 65, housebound, or live in a nursing home.
- Spend 15 to 30 minutes in the sun at least three times a week. That means outdoors, wearing short-sleeved or sleeveless shirts and no sunscreen. While ads and labels tell you to apply (a lot of) sunscreen, you'll be much better off giving your body some pure sun exposure before slathering it on. This is particularly important for older people, because as we age, natural vitamin D production becomes less efficient. An 80-year-old gets only half as much vitamin D from a given time in the sun as an eight-year-old.
- Daily supplementation is necessary to maintain *consistent* protective levels of vitamin D. Check your daily supplement to see if it contains 800 IU of vitamin D. If it doesn't, boost your intake of vitamin D. Keep in mind that vitamin D is fat-soluble, so for optimum absorption you should consume some other fats when you take it. If you're on a fat-restricted diet, take flax oil at mealtime with your multi-nutrient.
- Fat-soluble vitamins like D become more difficult to digest as you get older, especially if you have had your gallbladder removed; so you should also take fat-digestive enzymes such as bile and lipase before eating. There are several excellent digestive enzyme products containing bile salts. One product I recommend is Cholacol by Standard Process Laboratories (800-848-5061 or *www.standardprocess.com*). I suggest two tablets immediately before each meal. If diarrhea occurs, reduce the dosage. I also recommend a digestive enzyme product containing bile salts called Lipo-complex from Progressive Laboratories (*www.progressivelabs.com* or 800-527-9512). Both companies sell to health care professionals so you'll need to ask your doctor to order these for you.
- Increase your intake of vitamin D-rich foods. Best sources are oily saltwater fish like salmon and sardines, fish liver oils, liver, wheat germ, bran cereal, nuts, seeds, green leafy vegetables, and eggs. You might be wondering why I left out milk. The truth is, there's still some question as to whether vitamin D-fortified milk and milk products help prevent vitamin D deficiencies, perhaps because there is so much variability in the true vitamin D content in milk. As a side issue, the inability to digest milk properly is a serious problem that can often lead to an allergic reaction in the intestinal tract and further health problems.

Alzheimer's Disease Often Begins in the Liver

More than four million people over the age of 65 suffer from the progressive memory loss and mental deterioration associated with Alzheimer's in the U.S. alone, but in less-developed areas of

Rheumatoid Arthritis? Go to the Beach

Many patients find their rheumatoid arthritis seems to get worse during the winter. Researchers believe this could be linked to decreased sun exposure. When the blood serum levels of 143 arthritic women were evaluated, it was discovered that calcium levels were normal, but vitamin D levels were significantly below normal in most of the women. In addition, those with the lowest vitamin D levels also had the highest number of symptoms. *(Sc J Rheum 93;22:172-177.)*

Most of the dietary vitamin D in this country comes from fortified dairy products, margarine, eggs, fish, and fish oil. However, with the exception of fish and fish oil, the recent trend has been to eliminate or minimize intake of these foods. And with the scare of skin cancer and the push to use sunscreens, people are no longer exposed to the other primary source of vitamin D, the sun. Elderly Americans are living longer, getting less exposure to the sun, and routinely are found to be deficient in vitamin D.

If you have rheumatoid arthritis, I would highly recommend getting at least 20 to 30 minutes of evening or early morning sunshine every day when possible...without the sunscreen!

the world like Africa the disease is practically nonexistent. This leads one to suspect that long-term exposure to pollutants and the ingestion of unnatural food products play a critical role in Alzheimer's and other modern diseases.

The liver is the largest organ inside the body, and it performs some of the most complex chemical tasks. One of its primary roles is detoxification of harmful byproducts. Pesticides, pollutants, constipation, alcohol, and medications also produce a constant stream of detrimental byproducts the liver must deal with.

Nutrients That Support a Healthy Liver

Acetyl-L-carnitine (ALC). A one-year study of 130 Alzheimer's patients from ten hospitals in Italy suggested that Alzheimer's disease can be slowed by increasing ALC, a derivative of L-carnitine, in the diet. Sixty-three patients were given supplemental ALC, while 67 were given a placebo. Both groups worsened; however, those taking ALC showed slower deterioration, better logical intelligence, verbal critical abilities, long-term verbal memory, and selective attention. No significant side effects were observed. *(Neurology 91;41(11):1726-32)*

ALC is one of only a few nutrients that can cross the "blood-brain barrier," the blood vessels and capillaries that protect your brain. ALC crosses this barrier and goes straight to the brain where it nourishes tissues and helps improve memory, cognition, and learning.

ALC production requires a healthy liver. The process of creating ALC begins with the transformation of the amino acid lysine by the liver. If liver function is normal, ALC levels can be raised by including more lysine in the diet.

Lysine. Lysine-rich foods include cottage cheese; chicken (dark meat is best); all types of fish; peanuts; pumpkin and squash seeds; lima beans; chick peas; lentils; soybeans; and instant skim milk. L-lysine is also available in supplement form. **Recommended dosages are generally 500–1,000 mg daily.** Best results are obtained when it is taken prior to mealtime. One excellent mail order supplier of the amino acid L-lysine is Jo Mar Laboratories, 800-538-4545 or *www.jomarlabs.com.*

Silymarin, a natural extract from the seeds of the milk thistle plant, can help regenerate liver cells *(Wiener klinische Wochenschrift 80;(19)678-683) (Arzneim-Forsch. 73;23:161).* A 70-percent extract of the herb *Silybum marianum* appears to be most effective. **Recommended dosages range from 150–300 mg, three times daily.** Several companies market standardized silymarin extracts. One excellent product is made by Enzymatic Therapy, Inc. It is available in health food stores. To locate a store near you, contact Enzymatic Therapy at 800-783-2286 or *www.enzy.com.*

Other Nutrients. Although little emphasis has been placed on treating Alzheimer's patients with vitamins, even small amounts have produced dramatic effects. **As little as 200 mg of vitamin C has been shown to raise carnitine levels** *(Nut Rep Int 87;37:941),* and one unpublished study suggested that half of a group of patients thought to have Alzheimer's were only deficient in one or more of the B vitamins!

Diet. Eat more fruits, vegetables, whole grains, and fresh pressed oils. This may seem like too simple of a solution for a disease that baffles even the most learned medical experts, but you can be certain that as our foods become more processed and adulterated, it will be simple nutritional supplements and whole natural foods that will provide many future cures.

Common Nutritional Deficiencies Can Lead to Age-Related Macular Degeneration (AMD)

In the U.S., 30 million people over age 65 will have AMD by the year 2025! Until about ten years ago, AMD was virtually unheard of in anyone under 60. Now it accounts for more than ten percent of cases of blindness in people under 60.

AMD involves a deterioration of the macula, the small, sensitive area on the back inner portion of the eye. If your macula were to be damaged, you would lose the central portion of your vision and be unable to read fine print or focus on small details such as picking out a familiar face in a crowd.

AMD may have some hereditary basis. Smoking, with its associated free radical formation, might play a role, as might aging. But these factors don't explain the rapid increase in incidence of AMD or

the progressively younger ages of those it affects. I believe that the significant changes in our diet and lifestyle over the last 30 years are the culprits. AMD is increasing all over the world, except in areas where people have refused to adopt modern diets and lifestyles. Where traditional diets and lifestyles still prevail, the incidence of AMD appears to be lower.

What to Do if You Have AMD

Doctors of optometry at the Indiana University School of Optometry have been doing some amazing studies of AMD and a condition called retinitis pigmentosa, a disease involving vision loss and deterioration of the retina. (As with AMD, there is currently no recognized cure for the problem or an effective way to slow its progression.) The doctors used several nutritional supplements. Each patient received the following daily supplements (half in the morning and half in the evening):

Beta-carotene	40,000 IU
Vitamin E (natural)	400 IU
Vitamin C	1,500 mg
Citrus bioflavonoid complex	250 mg
Quercetin	100 mg
Bilberry extract	10 mg
Rutin	100 mg
Zinc	25 mg
Selenium	100 mcg
Taurine	200 mg
N-acetylcysteine	200 mg
L-glutathione	10 mg
Vitamin B	250 mg

(Retinitis pigmentosa patients received a different nutritional mix consisting of a multimineral and vitamin formula and 750 mg of taurine, 300 mg of bilberry, and 50 mg of zinc daily.)

Over a two-year period, 46 patients with AMD, whose vision would normally deteriorate over that period, were placed on the above supplement program. When tested using an eye chart, they gained an amazing average of 8.5 letters of acuity per eye. This shows how important certain nutrients are to eye health.

Dr. Bob Thompson, president of the Macular Disease Society in the United Kingdom informed me of studies conducted in Japan and Italy. Research found that while AMD is now a very common cause of blindness in urban Japan, it is extremely rare in distant Japanese fishing villages. Similarly, in the traditional town of Salandra, Italy, the incidence of AMD is only one-fourth the rate in the rest of Italy.

Answers Are Elusive, but You Can Take Preventive Actions

Conventional medicine has nothing to offer in the way of effective treatments. Once one suffers a loss of vision, "low vision aids" such as high-powered magnifiers and prisms are the only help modern medicine suggests. With rarer forms of AMD, lasers are used, but they are ineffective at halting destruction of macular tissue.

Prevention is the best solution. Here are some steps that can reduce your risk for AMD:

- Avoid cholesterol-lowering drugs and fake fats (the so-called "fat-blockers" being sold as diet aids). They pull essential fatty acids from your body like a magnet and leave you more susceptible to AMD.
- Eat eggs regularly. The "egg scare," fueled by cholesterol misinformation, promotes a shortage of carotenoids like lutein and zeaxanthin, which are essential for healthy vision.
- Eat a wide variety of fresh fruits, vegetables, berries, nuts, and seafood.
- Eliminate artificial sweeteners and minimize your intake of sugar and refined carbohydrates.
- Take one tablespoon of cold-pressed flaxseed oil or two to three tablespoons of freshly ground flaxseed daily. You can put the ground seeds on cereal or in salads or juice to help balance essential fatty acids.
- Take a high-quality multivitamin and mineral complex every day to get the antioxidants, fat-soluble vitamins, trace minerals, and other components necessary for good vision and health.
- Do not take aspirin regularly. I write more about this in the November 1988 issue of *Alternatives* in an article titled, "Aspirin and Blindness." (*Publishers' note:* Back issues of *Alternatives* can be ordered at 800-718-8293.)

The Invisible Epidemic

People are dropping like flies around us from diabetes and heart disease, and for some reason no one seems to recognize and/or report the connection between these deaths and sugar.

When you consume sugar or a meal heavy in high-glycemic foods (i.e., most breads, pastas, colas, refined grains, white-flour products, alcohol, corn, skinless potatoes, white rice, etc.), it causes a rise in your blood sugar. To keep it from getting too high, your pancreas releases insulin. Insulin helps move blood sugar (glucose) out of the bloodstream and into each of the cells in the body where it can be used as fuel. Under ideal circumstances, your pancreas will release the exact amount of insulin it takes to bring your blood sugar down into the normal range. Unfortunately, if you were born with a weak pancreas, or if you abuse your pancreas through a lifetime of eating sweets, you can develop hyperinsulinism and insulin resistance.

Hyperinsulinism is a very common occurrence. It happens when the pancreas overreacts to an increase in blood sugar levels and secretes too much insulin. This creates a couple of immediate problems. First, it causes the blood sugar to drop down further than normal, creating hypoglycemia, or low blood sugar. Second, this blood sugar condition triggers fatigue, depression, headaches, and the craving (addiction) for more sugar to bring the blood sugar up to normal. Over the long term, your body's cells can develop what is called insulin resistance. In effect, they become less sensitive to insulin, and it takes more insulin for them to "open up" and allow glucose to enter. This makes matters worse by forcing the pancreas to produce and secrete even more insulin. *(Vnitr Lek 99;45(10):614-7)*

The Sugar/Heart Disease Connection

In addition to lowering blood sugar (by moving glucose into the cells), higher-than-normal levels of insulin have some not-so-positive effects.

High insulin levels increase triglycerides, harmful forms of cholesterol, blood pressure levels, and blood platelet stickiness. They also cause damage to arterial walls. All of these conditions contribute to the development of heart disease and atherosclerosis, or clogging of the arteries. This link is so strong that two-thirds of heart attack victims also have blood-sugar problems. *(Lancet 02;359:2127-2128, 2140-2144)*

I have a feeling we'll soon find the above numbers to be even higher as more data become available. If you've experienced a heart attack or suffer from heart disease, I highly recommend getting your fasting blood sugar checked. It will be difficult or impossible in most cases to reverse or prevent recurring heart disease if you're diabetic or in a pre-diabetic state.

Another side effect of too much insulin is also not well-known. Excess insulin triggers a metabolic reaction that causes the body to store unusually large amounts of fat, particularly fat that has recently been ingested. *(Acta Med Port 00;13(4):302-10) (Cardiogia 99;44(10):885-99)*

The Link Between Baldness and Heart Disease: A Sweet Problem?

When I equated the consumption of sugar with slow suicide in *Alternatives* (September 2000), the feedback I received told me that a lot of readers had taken steps to curtail their sugar consumption. Recent research results linking premature hair loss to increased sugar consumption, might encourage those who still consume too much sugar to change their eating habits.

Researchers found that men who experienced early male-pattern baldness (beginning before age 35) had an increased incidence of insulin resistance and higher blood levels of insulin. They had a two-fold increase in hyperinsulinemia, a two-fold increase in moderate obesity, and a nearly 150-percent increase in severe obesity. They were also more likely to be taking medications for high cholesterol, high blood pressure, and diabetes. *(Lancet 00;356(9236):1165-6)*

Based on this information, **it would seem that if you begin to lose your hair before age 35, there's a good chance the loss could be related to imbalances stemming from excess sugar and carbohydrate consumption.** Cutting back on sugar and refined carbohydrates is a far more sensible course of action than reaching for the Rogaine. Diet changes address the cause of the problem; drugs merely treat the symptom.

Digestion Problems Can Lead to Prostate Cancer

The National Cancer Institute studied the records of 2,440 men over age 50. Those who developed prostate cancer were found to have significantly lower blood levels of vitamin A. In fact, those with the lowest vitamin A levels had twice the risk of developing cancer when compared to those with the highest levels *(Cancer Res 90;50:2311-15)*. But before you start loading up on vitamin A, let's look at this a little closer.

One of the first items that should be addressed when treating prostate conditions is fat digestion. **Men with prostate cancer have been shown to be deficient in practically every fat-soluble vitamin (A, D, E, and K), essential fatty acids, and bioflavonoids. Such deficiencies strongly suggest a fat digestion problem.**

The inability to digest fats or fat-soluble vitamins can lead to serious health problems, such as constant fatigue (fats provide long-term energy), dry skin, and eye problems. You may bruise and bleed easily, which can lead to a stroke. Hormonal systems can't function properly since all hormones are made from fats. And this is only a partial list of symptoms.

Increased gallbladder efficiency alone may alleviate the problem. The gallbladder stores and regulates bile, which is essential to the digestion of fat. As fat passes into the small intestine, the gallbladder dumps in the proper amount of bile to aid fat digestion. It's not uncommon for the gallbladder to become clogged with stones or the bile to become thick and sluggish. This can cause plenty of problems. Within 20 minutes after eating, you may feel bloated, uncomfortable, and/or sick to your stomach. You may have pain in the gallbladder area just under your ribs on your right side or feel a stiffness or aching on the right side of your neck. These sensations are worse if the food you've eaten is fried or greasy. *(Publisher's note: Dr. Williams' cassette tape program on ways to improve gallbladder function is available from Mountain Home Publishing, 800-527-3044.)*

Sometimes the Solution Is as Simple as a Digestive Enzyme

As we age, our bodies produce fewer of the enzymes and digestive acids that enhance absorption of food nutrients, cleanse and detoxify your system, and promote healthy immune function. If you don't have enough digestive enzymes to break down food particles and absorb nutrients properly, your body is limited in its ability to manufacture the enzymes you need to stay healthy.

There are dozens of available digestive enzymes on the market. A good product will include acids and enzymes similar to the ones produced by the stomach, like pepsin and betaine hydrochloride. It should also include enzymes produced by the pancreas and those present in bile from the gallbladder. If you have trouble locating a good product, contact Progressive Laboratories at 800-527-9512 or *www.progressivelabs.com*. They sell an excellent product called Digestin #987. If you mention that you're an *Alternatives* subscriber, they'll give you a discount.

Also, I can't overemphasize the role of raw foods in digestive health. Raw fruits and vegetables contain live vital organic elements, particularly enzymes that help digest proteins, fats, carbohydrates, and soluble fiber.

Calcium Deficiency Could Be Causing Cold Sores

Besides being ugly, cold sores can be painful and, in general, a nuisance. Cold sores, fever blisters, canker sores, eye twitching, muscle cramping, and even hives often surface when tissues are starved for calcium. Cold sores come from a virus, but they only surface when calcium levels are low. In fact, the appearance of these sores is a strong indication of a calcium deficiency in tissues.

Many people take calcium supplements and get plenty of calcium from food, but the calcium never reaches their tissues. The result: the conditions mentioned above. That's when vitamin F can come to the rescue. Vitamin F refers to certain essential fatty acids (linolenic, linoleic, and arachidonic) that have a profound influence on your body's ability to utilize calcium.

When you ingest calcium, vitamin D pulls it out of the gastrointestinal tract into the bloodstream. Vitamin F takes over and pulls calcium out of the bloodstream across cell membranes and into body tissues. If your system is lacking in vitamin F, the calcium stays in the bloodstream and never gets to tissues.

Forgetting Things? The Problem Could Be Stress—The Solution Could Be Hard to Believe

I'm not a fan of corticosteroids or stress hormones and I doubt I ever will be. I've seen far too many patients who have suffered from the ill effects of these drugs, and I'm certain there are hundreds of thousands more who are unaware that many of their problems stem from corticosteroid use.

Corticosteroids are one of the reasons—if not the major reason—for the memory impairment that comes with age. **Now, fascinating research has just been released from the Gifu University in Japan revealing that chewing can improve memory by reducing the release of stress hormones.** The ability to chew properly lowers stress and stress hormones. Researchers found that elderly people with missing teeth or teeth in a state of disrepair chewed less, which subsequently led to an increase in stress hormone levels.

While the complete mechanism hasn't been worked out, magnetic resonance imaging (MRI) has demonstrated that the hippocampus, which helps control blood levels of stress hormones, is stimulated during chewing. The hippocampus is a horseshoe-shaped region of the brain that weighs the importance of acts and decides what should be kept as memories. Memories are stored in the hippocampus until they are transferred to the cerebral cortex for permanent storage.

Thus, good dental health and chewing properly appear to be important for preserving memory.

If you're taking calcium every day, but the calcium isn't getting to the muscle cells either because of poor circulation or poor assimilation by your digestive system, change calcium supplements! The type of calcium makes a difference. There are literally hundreds of calcium products on the market, but I recommend one that contains the digestive acid betaine hydrochloride, additional magnesium, and vitamin D. Each of these will help increase the amount of calcium you assimilate into your system. One such product is Tri-Boron Plus by Twinlab. It is available at the Vitamin Shoppe (800-223-1216 or *www.vitaminshoppe.com*). If these don't give you positive results, there's a strong likelihood that you need more vitamin F.

How to Increase Your Levels of Vitamin F

There are several ways to get additional vitamin F in your diet. Meat fats and butter contain arachidonic acid, but many of us have wisely cut back on these foods. Many vegetable oils—flax, sunflower, safflower, or evening primrose oil—contain either linolenic acid or linoleic acid. Under normal conditions, your body should be able to convert these acids to arachidonic acid, allowing you to benefit from all three fatty acids. If you've used these oils and continue to have the above problems, your body could be having a hard time converting linolenic or linoleic acid into arachidonic acid.

A good way get consistent levels of arachidonic acid is with Cataplex F, made by Standard Process Products. Cataplex F tablets provide arachidonic acid, calcium, and other nutrients that raise vitamin F levels. The recommended dosage is three to nine tablets a day. Start out with two or three tablets with each meal, then gradually cutting back to one with each meal as the problem improves. As far as I know, Standard Process is the only company to develop an arachidonic acid complex. They sell only to medical professionals, but you can contact them at 800-848-5061 or *www.standardprocess.com* for the name of a nutritionally-oriented practitioner in your area.

Fix the Hormone Imbalance Causing Salty Food Cravings

Unfortunately, even most doctors don't really understand that fluid retention or edema may actually be a sign of weakened adrenal glands. I've written many times about how stress, sugar, caffeine, and alcohol can overtax the adrenal glands, and about the many conditions commonly ascribed to other causes that are actually the result of adrenal exhaustion. Fluid retention can result in weight gain, muscle fatigue, flu-like symptoms, high blood pressure, and even stroke. At the risk of over-simplifying the connection between edema and adrenal gland function, I'll

give you a brief overview of how fluid retention is often a symptom of a deeper problem.

More than half of your body consists of water, so it is crucial to your health to maintain a proper balance of this element. Although you constantly lose water through breathing, perspiration, urine, and bowels, under normal circumstances, the total amount of water in your body is kept reasonably in balance. On a cellular level, a balance between the fluid in cells and the fluid surrounding cells is maintained by potassium and sodium. Potassium stays mostly inside the cell and sodium in the fluid surrounding cells. When the balance between potassium and sodium gets out of kilter, fluid begins to accumulate inside or around cells. This causes puffiness and bloating.

Aldosterone, a hormone produced by the adrenal glands, keeps sodium and potassium levels balanced by helping the kidneys retain sodium from urine and eliminate potassium. This maintains water levels. When adrenal glands become fatigued, overworked, or depleted, they produce less aldosterone. As a result, sodium and water spill into urine, and the body doesn't eliminate enough potassium from cells. It begins diluting the potassium by forcing more water into cells. As a result, cells begin to swell, which causes fluid retention.

Fluid retention is one of the first signs of low aldosterone levels. Losing sodium and water while retaining potassium can start symptoms that even most doctors fail to associate with weakened adrenals: constipation, headaches, and constant fatigue; excessive sweating or perspiration, especially with little activity; lower back pain and/or knee weakness or pain, especially on one side; muscle twitches; cardiac arrhythmia, or heart palpitations; sensitivity to light; or cravings for salt.

How to Bolster Your Adrenal Gland Function

To strengthen adrenal glands and promote production of aldosterone, I recommend the following steps:

- Adding a little salt to your diet can help re-establish the sodium/potassium balance. When you crave salt, eat more sodium-rich foods, such as celery, green beans, zucchini, seafood, cottage cheese, vegetable soups, and sauerkraut.
- Eat several (four to six) *smaller meals* or snacks throughout the day, rather than two or three large meals, which will take a burden off the adrenals and allow them to rebuild.
- Eat higher-protein foods. Protein doesn't stress the adrenals by causing rapid blood sugar *fluc*tuations. Protein also tends to pull excess fluid from tissues. This is one reason people lose weight quickly on high-protein diets. Much of the initial weight loss is fluids.
- Avoid sugars and refined carbohydrates, such as are found in desserts, candy, soda, and fruit juices.
- Support adrenals with a good multivitamin or vitamin B-complex. I also recommend using a high-quality adrenal glandular like Drenamin from Standard Process Laboratories. They sell only to healthcare professionals. To find a nutritionally-oriented doctor in you area you can contact them at 800-848-5061 or *www.standardprocess.com.*

Avoid Acid-Producing Foods if You Have Osteoporosis

The pH scale measures the acidity or alkalinity of a substance. It is also a subtle measurement of the body's electrical balance, which regulates many bodily functions. The pH scale runs from 0 to 14 (with 0 being the most acidic, 14 being the most alkaline, and 7 being neutral). Our bodies must maintain pH near 7.4, which is just on the alkaline side of neutral. If the pH varies too much from the "ideal," it becomes difficult for enzymes to function properly. And even a drop to just 7.38 can cause your body to start breaking down bone and muscle tissues for their alkalizing ammonia, carbonates, and phosphates. Maintaining this slightly alkaline state is a constant challenge, primarily because of the acid-forming functions that take place in the body and the over-abundance of acid-producing foods we eat.

The idea that foods influence body pH isn't new. In fact, as far back as the early 1900s, doctors began studying the pH-altering effects of different foods. They found that while a few foods were "neutral" in their effects, most foods were either alkaline- or acid-producing. They also found that simply changing the diet changed the pH of the body and brought it closer to the normal range, which rid patients of many health complaints. For some reason, however,

(Continued on page 10)

Who's Who of the pH Crew

Over-acidity comes from consuming too many acid-forming foods and not consuming the alkalizing foods to counteract them. As you will see from the list on the left side, just because a food is acid-forming doesn't necessarily make it unhealthy, and I'm not saying you should avoid all of them. In fact, many of the acid foods are necessary for proper health. It's just a matter of balance. Fixing your acid/alkaline balance isn't the complete answer to perfect health; it's one piece of the puzzle that is being dangerously overlooked.

After looking at the alkaline- and acid-forming foods, you might feel that you eat enough of a variety to balance your pH levels. If you can honestly say that 75 to 80 percent of all your meals consist of alkaline foods, then you're doing okay. But usually that's not the case; and if it's not, I suggest making changes in your diet.

Acid-forming Foods

- All meat, chicken, and fish
- Rice (white, brown, or basmati)
- Cornmeal, oats, rye, spelt, wheat, bran
- Popcorn
- Pastas
- Breads and most other grain products like cereals (hot or cold), crackers, pastries
- These beans: pinto, navy, mung, lentils, black, garbanzo, red, white, adzuki, and broad
- Cheese
- Sunflower and pumpkin seeds
- Wheat germ
- Walnuts, pecans, cashews, pistachios, macadamias, filberts, Brazil nuts, peanuts
- Dried coconut (fresh coconut is alkaline-producing)
- Colas (Phosphorus in cola turns to phosphoric acid and destroys bone.)
- Alcoholic drinks
- Coffee and other caffeinated drinks
- Sweetened yogurt
- Most sweeteners (artificial sweeteners, cane sugar, beet sugar, barley syrup, processed honey, maple syrup, molasses, fructose, lactose)
- Refined table salt
- Soy sauce
- Mustard (dried powder and processed)
- Ketchup and mayonnaise (unless natural and homemade)
- White vinegar (Apple cider and sweet brown rice vinegar are less acid-producing)
- Nutmeg
- Practically all drugs

Alkalizing Foods

- Practically all vegetables
- Practically all fruits except blueberries, plums, prunes, and cranberries. Citrus fruits such as lemons, which we think of as acidic, are alkaline-producing.
- Beans such as string, soy, lima, green, and snap
- Peas
- Potatoes
- Grains such as flax, millet, quinoa, and amaranth
- Almonds, pignoli, fresh coconut, and chestnuts
- Sprouted seeds of alfalfa, radish, and chia
- Unsprouted sesame
- Fresh, unsalted butter
- Milk
- Cream
- Goat milk
- Eggs
- Whey
- Plain yogurt
- Sweeteners like raw, unpasteurized honey, and brown rice syrup
- Fruit juices and all vegetable juices
- Most herbal teas
- Garlic
- Gelatin
- Most herbs and spices
- Miso
- Most vegetable and unprocessed sea salt
- Vanilla extract
- Brewer's Yeast
- Most unprocessed, cold-pressed oils are neutral or alkaline-forming

(Continued from page 8)

mainstream medicine never fully accepted this idea, and I don't think most people are aware of just how critical proper pH is to health.

Calcium Isn't the Answer to Osteoporosis

A prime example is calcium. Most scientists and medical professionals seem to realize that risk factors such as calcium deficiency, too much meat protein, smoking, menopause, and a lack of exercise play a role in osteoporosis. However, these factors account for less than half of all hip fractures, and some recent guidelines suggest children and teenagers should get more calcium. This reasoning is based on the belief that by the early 20s, we have developed the strongest bone structure we will have, and after age 20, bones begin to deteriorate. Basically, these "experts" accept the idea that osteoporosis and bone loss is a normal part of aging, so one should start with the strongest bones possible.

Don't get lured into this way of thinking. Calcium isn't the answer. Diet is. **All the calcium in the world won't rebuild bones if it's accompanied by an acid-producing diet.** And only a handful of researchers realize the true role acidic pH can have on living bone. Research from Germany has found that those living in countries like South Africa and Singapore consume less than one-third the recommended amount of calcium, but they have fewer hip fractures than their Western counterparts because they eat a low-acid-producing diet.

Anthony Sebastian and Deborah Sellmeyer with the University of California in San Francisco looked at over 85 different studies and evaluated typical diets in 33 countries. They discovered a direct relationship between diets high in animal protein such as fish, meat, and cheese, and the incidence of hip fractures. Germany and Sweden, with the highest consumption of these foods, had 40 times as many hip fractures as did Thailand. While the Thai population does consume enormous amounts of acid-producing rice dishes, it also consumes far more fruits and vegetables, one-third as much meat, and practically no cheese. *(J Gerontol A Biol Sci Med Sci 00;55(10): M585-92)* A follow-up study by the same researchers found that women eating a high acid-producing diet had more rapid bone loss and a 3.7-times greater risk of hip fracture than women eating fewer acid-producing foods. *(Am J Clin Nutr 01;74(3):411-2)*

Acidity Affects More Than Just Your Bones

Although I've discussed the benefits of an alkalizing diet mainly in regard to osteoporosis, there are many other advantages to such a diet. Some relate to the physical characteristics we associate with aging, such as a loss of muscle and strength. Chronic acidosis, which results from a high acid-forming diet, breaks down muscle as well as bone. Like water wearing down a rock, the erosion of bone and muscle is a slow, gradual process. As time passes, one gets weaker and more fragile, begins to look and feel older, and movements become more difficult. **One of the first muscle groups to noticeably weaken is in the legs.** When thigh muscles weaken, it gets more difficult to get out of a chair or car, and harder to walk. Many people lose their independence. Exercise will help, but without shifting to a more alkaline-producing diet, most people will experience only marginal and temporary results.

Some researchers now believe that acidosis is a major contributing factor to several other health problems in addition to bone and muscle loss. **Acidic tissue levels appear to be common during the initial formation of cancer, and may contribute to insulin sensitivity problems that lead to diabetes.**

Snacks That Rob Your Body of Protective Nutrients

Even though olestra products have been on the market for years, too many people haven't gotten the word that these are not a license that allows them to snack on potato chips and other junk food. It's been over 17 years since I first warned about olestra, and the concerns I had in January 1988 are still valid.

Olean (the brand name of olestra) starts out as soybean or cottonseed oil and is processed in a way that allows it to pass through the body without being digested. You might ask what's wrong with that. Well, it was established in early testing that during its journey through the digestive tract, it latches on to fat-soluble vitamins (A, D, E and K) and carotenoids and carries them out of the body. As a result the FDA required Procter & Gamble to fortify the oil with four fat-soluble vitamins. However, the fact that the amounts added are so minute and the carotenoids were totally over-

looked still makes Olean a significant health hazard in my book.

It seems that every day we hear about some new health benefit associated with the carotenoids. These amazing compounds mop up DNA-damaging free radicals and have been linked to the prevention of dozens of our most common diseases. Beta-carotene has been shown to enhance the immune system's ability to detect and eliminate viruses and cancer cells, as well as decrease the risk of heart disease, arthritis, and prostate cancer. Lycopene, another carotenoid, helps prevent prostate cancer in men and breast cancer in women. And lutein helps prevent several forms of cancer as well as the leading cause of blindness in the elderly, macular degeneration.

Thus, I'm hard-pressed to understand how the FDA can be so short-sighted in approving Olean. It means millions of people consume snack foods that can only lead to a further increase in the most common forms of cancer and blindness.

Studies have revealed that eating just a single ounce of olestra-containing chips daily for two weeks causes carotene levels in the blood to drop by 50 percent! I can't think of a more bizarre and idiotic circumstance—government agencies have openly recognized the importance of carotenoids in the diet, yet the FDA has given the green light to market products that deplete these same compounds.

The Little-Known Cause of High Blood Pressure

Precious few medical professionals will acknowledge that many of today's common health problems can be traced to widespread hypothyroidism, and few people associate hypothyroidism (an underactive thyroid gland) with high blood pressure.

One study showed that of 688 patients with high blood pressure, almost one-third of those who also had underactive thyroid functions experienced a return to normal blood pressure range when they were treated for thyroid condition. *(Hypertension 1988;11(1):78-83)*

How's Your Thyroid?

Fortunately, determining if your thyroid is underactive is one of the easiest tests you can perform. It's also practically foolproof. All you have to do is check your basal metabolic rate by taking the temperature of your body at your underarm. This simple test gives far better results than traditional thyroid blood tests. The only reason it's not recommended more is that nobody can figure a way to make money off of it. Here's how you do it:

1. Place an oral thermometer by your bed. If it's the mercury kind, shake it down to at least 96 degrees.
2. When you wake up the next morning, immediately place the thermometer in your armpit and leave it there for 10 minutes before getting out of bed. Just relax and remain still during the test.
3. Record the temperature.

Men and premenstrual and postmenopausal women can do the test any time. Women in their menstrual years get the most accurate readings on the second or third day after menstrual flow starts. A reading anywhere between 97.2 and 98.2 degrees is considered normal (your morning temperature will be lower than your temperature later in the day, which is usually around 98.6 degrees). Temperatures outside that range generally indicate a thyroid imbalance.

You've Checked Your Thyroid and It's Underactive. Now What?

The logical starting point is to balance body chemistry naturally. **The high rate of hypothyroidism in this country stems from a lack of iodine in the diet.** Iodine consumption has dropped dramatically in this country over the past 20 years due in part to the depletion of our soil and in part to less iodized salt being used in our food. Iodine is one of the essential components of thyroid hormones. Without sufficient iodine, the production of thyroid hormones is limited. *(J Clin Endocrin and Metab 98;88:3401-3408)*

One of the most effective ways to rebalance your thyroid gland is to take a liquid iodine product called Iosol that I've used for years. Take four drops in water each day for the first two weeks, then reduce the dosage to two drops per day. (**Note: Under no circumstances should you ingest antiseptic or topical iodine. Iosol is the only form of iodine I recommend for internal usage.)** You can often find Iosol (by TPCS Distributors) in larger health food stores or you can order it from Sullivan Creek Distributing (888-406-4066 or *www.sullivancreek.com*).

The Health Costs of Hypothyroidism

Heart disease and its associated complications are the most serious side effects of an underactive thyroid. This plague remains the number one killer in this country, and there are no signs of that changing anytime soon. If you asked most people on the street which they fear more, cancer or heart disease, they'd probably say cancer. But I'll bet that for every person you know who has died of cancer, you can think of another 20+ people who are on cholesterol or blood pressure medication, have had bypass surgery or angioplasty, or have died from cardiovascular problems.

Furthermore, while cancer has perhaps hundreds of causes, many of which we don't know, we know most of the major factors linked to heart disease. Diets high in fried foods and sugar, smoking, lack of exercise, and obesity are all firmly established risk factors for heart disease. The antidote to each of these is evident. But research over the past decade has identified another risk factor that seems to be even more telling than diet and lifestyle, one whose antidote has until recently been less apparent. That risk factor is high blood levels of homocysteine. I've written about the dangers of high homocysteine levels in the past, and we're finally hearing it mentioned in the mainstream press. Homocysteine is created when the amino acid methionine, found in red meat, milk, and milk products, is broken down in the body. Under ideal circumstances, the body breaks down homocysteine with the help of vitamins B6, B12, and folic acid.

Studies continue to establish stronger links between even moderately elevated blood levels of homocysteine and heart disease. In the *1992 Physicians' Health Study,* men with very high homocysteine levels had a risk of heart attack three times that of men with normal homocysteine levels. In fact, an elevated homocysteine level was such a dominant factor that it indicated increased risk even in the men who had no other cardiovascular risk factors.

Because of the importance of homocysteine levels as a heart attack risk factor, efforts have thus far concentrated on lowering high levels through any means possible. And up until now, the only consistently successful approach has been to increase the intake of the previously mentioned B vitamins. However, new research indicates that *simply lowering homocysteine levels in this manner may be masking a more serious underlying problem, the one that's causing the elevated levels in the first place.* This bigger problem, as I alluded to earlier, is an underactive thyroid.

Researchers at the Cleveland Clinic Foundation in Ohio have released new findings showing that *correcting an underactive thyroid gland normalizes elevated homocysteine levels in the blood.* Even more amazing is that the researchers were able to normalize homocysteine levels without having to administer any of the B vitamins. In other words, correcting the thyroid problem in turn corrected the vitamin deficiency. *(Ann Intern Med 99;131(5):348-51)*

If the Iosol alone does not seem to alleviate the symptoms of hypothyroidism, try a glandular product called Thytrophin, with just one drop of Iosol per day. Thytrophin can often replace prescription thyroid medications. It is made by a highly reputable company called Standard Process Products. Unfortunately, they sell only to medical professionals, but if you call them (800-848-5061), they'll help you find a physician who can order Thytrophin for you. Or you can sometimes order from a willing distributor, such as For Your Health at 800-456-4325.

In addition to Iosol and Thytrophin, make sure that you're also taking a good multivitamin-mineral product daily to ensure that you get important trace minerals such as selenium (200 mcg per day) and other components necessary for the production and conversion of thyroid hormones.

The length of time needed to obtain results from treating hypothyroidism will vary. Most people begin to see a marked difference in their energy levels and mood within just a few days, but other problems may take longer to resolve.

Dr. David Williams

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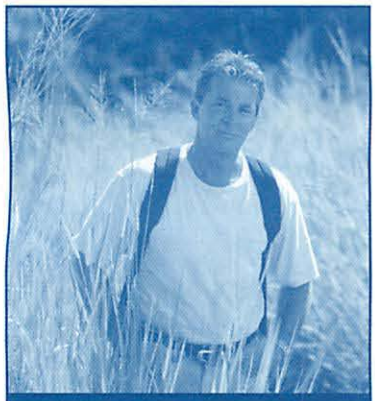

Dr. David G. Williams

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A Lifetime of Sharp Vision

In our society, aging and vision problems have become almost synonymous. But in my travels around the world seeking out the best natural healing remedies and cures for my readers, I often encounter people in their eighties, nineties, and beyond who have the clear, sharp vision of youth. What's their secret?

Let me tell you a story. I was recently chatting with the chairman of the AMD (age-related macular degeneration) Society in London. He shared with me some fascinating studies on this subject. Researchers found that AMD is now a very common cause of blindness in urban Japan but is extremely rare in remote fishing villages. A similar scenario was found in Italy. Everywhere that traditional diets and lifestyle still prevail, the incidence of serious vision problems appears to be lower.

What's really exciting to me is that there is literally a world of support out there to help "feed" your eyes the nutrients they need to maintain your sight for a lifetime. In my recent travels to China and India, for example, I learned that an ancient herbal compound known as triphala (pronounced tree-FAH-lah) has been prescribed for thousands of years. Practitioners of Ayurvedic medicine consider triphala to have antioxidant, detoxifying, and restorative effects throughout the body and often use it to treat failing vision and protect against cataracts. I'll tell you more about this remarkable herbal combination in a few moments, but first I want to clue you in on why I think our nation is on the precipice of a vision crisis.

I've long believed that our nation's epidemic of vision loss is connected to the free-radical damage wrought by the perils of "modern" society. At the top of the list is nutrition and diet, most notably the high levels of unhealthy "trans" fats and refined sugars that take a toll on health. In addition, there is evidence that lack of exercise might contribute to vision problems. Then there's the deteriorating quality of our air and water. I'm also concerned about accelerating use of prescription and over-the-counter medications, including antibiotics, antihistamines, and steroids, many of which have been linked to vision deterioration.

When it comes to anti-aging, I believe that vision ranks right up there with heart, brain, and bone health. And it's no accident: the same blood vessels that carry nutrients to your eyes and carry off wastes also serve your heart, brain, and bones. When a key nutrient is missing in one area, or a harmful substance takes its place, every area becomes vulnerable. What affects your vision affects all of you—so to keep your eyesight sharp, you must think about taking care of your whole body.

At least a dozen serious conditions can take aim at your vision. Some are merely annoying; others are downright dangerous. In this special report, I will focus on the "Big Three": macular degeneration, cataracts, and glaucoma. While surgery and medication are sometimes unavoidable, I encourage

you to consider my program of dietary and lifestyle changes. They are easy to incorporate into your life and will give you a clear edge when it comes to preserving your sight.

Age-Related Macular Degeneration: America's Next Epidemic?

I decided to lead off this report with age-related macular degeneration (AMD) because it's the leading cause of blindness among the elderly in this country. In the U.S. alone, some 30 million people over age 65 are projected to have AMD by the year 2025.

Until about 10 years ago, AMD was virtually unheard of in anyone under 60. Now it accounts for over 10 percent of blindness in people under the age of 60 and is starting to show up in people as young as 30—a disturbing trend. But even with over 165,000 new cases diagnosed in the country each year, little information is given to the general public about how to prevent this terrible disease.

How does it happen? On the back of each of your eyes, in the center of the retina, is a spot called the macula. This yellowish oval area doesn't have as rich a blood supply as the retina, but contains a vast network of nerve fibers. These fibers transmit visual signals directly to the brain, enabling you to read fine print or focus on small details such as a face in a crowd.

Send "Floaters" Out of Sight

Many subscribers have written to me about how to get rid of "floaters," those small spots that seem to float across your field of vision. These are actually small particles formed by the gradual breakdown of the vitreous fluid in the eye. As they drift through this fluid, they may temporarily block incoming light and cast a shadow on your retina, which you will see as a dark spot.

Through the years, you may even learn to recognize familiar individual floaters by their distinctive sizes and shapes. Most are harmless, and simply settle out of view over time. **If, however, you experience a sudden "shower" of floaters, especially if accompanied by other visual disturbances, it could indicate bleeding into the eye or even retinal detachment. Should this occur, seek help without delay from your ophthalmologist.**

Certain antioxidants, vitamins, and minerals may help to retard vitreous fluid breakdown and formation of floaters. Check your multi-vitamin/mineral supplement for adequate levels of vitamins A, B1, B5, B6, C, and E plus zinc, selenium, and the amino acid cysteine.

Degeneration of the macula may occur in two forms. The most common form—called the "dry type"—occurs when small, fatty blobs are deposited in the macular area. These blobs block the small blood vessels that supply oxygen to the area. Without sufficient oxygen, the macula is slowly destroyed.

Up to one-quarter of these cases progress to the second type, called the "wet" or neovascular type. This occurs when new blood vessels literally invade the macula. These new vessels leak fluid, which turns into scar tissue, permanently damaging the macula. Although the dry type can take several years to develop and progress to the wet type, the wet type can occur independently, and its course may be rapid. It's not unheard of to go from normal vision to blindness within a few days to weeks.

There is no known cure for AMD, but there is growing evidence that nutritional supplements and diet may be able to slow its progression.

Prevention Is Your Best Defense

Your best defense against AMD and other degenerative eye diseases is to start with a diet rich in colorful fruits and vegetables, such as carrots, spinach, and tomatoes. Their deep colors signal the presence of **beta-carotene,** alpha carotene, and other mixed carotenoids, powerful free-radical scavengers whose pigments literally "collect" on the surface of the macula and prevent its degeneration.

To maximize your intake of both carotenoids and bioflavonoids, try to eat five to nine servings of fresh fruits and vegetables daily, along with nuts, seeds, teas and, in moderation, red wine. Better yet, pour yourself a cup of green tea. Its principal ingredient has been found to be 200 times more powerful than vitamin E in neutralizing pro-oxidants and free radicals.

Many of these foods—and even eggs—are rich in **lutein** and **zeaxanthin**, a pair of potent carotenoids proven to help maintain healthy vision. This duo acts like natural sunglasses to filter out harmful ultraviolet rays and promote macular density in the eye. I've also found that marigold extract provides a potent and easily absorbed form of these nutrients. Choose a multivitamin that includes at least 6 mg lutein per day.

Bioflavonoids are a broad and diverse class of thousands of natural compounds that have a wide range of antioxidant and free-radical scavenging effects—from cardiovascular health to cancer prevention to eye health.

Some of the bioflavonoids receiving attention from researchers in recent years include those found in grape seeds, green tea, soybeans, citrus, onions, and bilberry.

You may have heard the story of how bilberry jam was used by fighter pilots in World War II to improve their night vision. There is evidence that this bioflavonoid helps prevent free radical damage and protect blood vessels in the eye. It often teams up with another member of this class, eyebright, to reduce inflammatory response in the eye, easing eye discomfort and oversensitivity to light.

Another bioflavonoid, rutin, has been studied for its ability to help strengthen capillary walls, thereby improving heart function and respiration, and ease hypertension. Bee pollen, one of my favorite "superfoods," is one of the few rich natural sources of rutin. You can also find it in supplement form or in combination with other antioxidants. Look for a supplement that includes approximately 10–100 mg rutin and at least 100 mg bee pollen.

Vitamin C, perhaps the most-studied nutrient of all time, has been used with success in slowing the progress of AMD. Recommended dosage is up to 2,000–2,200 mg daily.

High levels of taurine are needed by the heart as well as the retina of the eyes. There is evidence that deficiency of this amino acid can lead to retinal degeneration leading to AMD. Supplementation has been successfully used to prevent, treat, and stabilize such changes. You can safely take up to 700 mg taurine daily.

Zinc is stored in many parts of the body, including the eyes, skin, hair, fingernails, and prostate gland. Take approximately 20–40 mg in a supplement and eat foods rich in zinc and other trace minerals, such as sunflower and pumpkin seeds, seafood, mushrooms, and brewer's yeast.

For vision health "insurance," take a high-quality multivitamin and mineral complex daily and/or a specialized vision formula that will supply you with antioxidants, fat-soluble vitamins, trace minerals, and other components necessary for good vision and all-around health.

Things to Avoid:

- High-fat diets, alcohol, smoking, diuretics, cholesterol-lowering drugs and corticosteroids may contribute to the increasing incidence of AMD (along with cardiovascular and many other chronic degenerative diseases) by depleting your body's zinc levels. Low levels of this trace mineral have been linked to AMD.
- "Aspirin-a-day." Aspirin therapy, often recommended for cardiovascular health, reduces the blood's ability to clot. Small retinal hemorrhages contribute to macular degeneration and eventually can lead to blindness. Researchers found that 109 patients with AMD were taking frequent doses of aspirin. Instead of aspirin, take vitamin E for both heart and eye health.
- "Fat blockers" containing chitosan, sold as diet aids, can make you more susceptible to developing AMD as well as heart disease. They work by binding to essential fats in the gastrointestinal tract and carrying them out with the stool. Unfortunately, they are nonselective, sweeping "good fats" out of your system right along with "bad fats." This means that you will lose fat-soluble vitamins and vitamin-like substances essential to the eyes, including lutein, beta-carotene, vitamins A, D, E and K, alpha lipoic acid, lycopene, and essential fatty acids.

  So throw away those fat blockers, and add foods like kale, sweet potatoes, and tomatoes to your diet. You should also take vitamin E (approximately 400 IU twice daily), vitamin C (up to 2,000–2,200 mg daily), and selenium (up to 250 mcg daily). You may also find that the herbal compound triphala (see p. 4 for details) will help rebalance your system.
- Eliminate MSG and artificial sweeteners such as aspartame, suspected to be toxic to eye circulation, and minimize the amount of sugar and refined carbohydrates in your diet. And don't forget to take plenty of flax seed oil or flax seeds to help rebalance your essential fatty acids.

Are You at Risk for AMD?

Among those at risk for AMD are adult diabetics, smokers, women, people with uncontrolled high blood pressure, fair-haired and light-skinned people, people with poor ability to digest nutrients and those with a family history of AMD. In addition, this chronic degenerative disorder has been linked to a number of medications, including NSAIDs such as ibuprofen, and hydroxchloriquine sulfate, a drug commonly prescribed for rheumatoid arthritis.

If you have been diagnosed with dry macular degeneration or are at high risk, it is very important that you check your vision at home two to three times per week with either the Amsler Grid Test or any grid pattern with a center dot. Cover one eye at a time

and look at the center point from a distance of about 12 inches. If the lines appear straight, the macula is normal. If the lines appear wavy or you experienced blurred vision, you may have early signs of neovascular (wet) macular degeneration. A later sign is a blind spot in the center of your visual field. To see the Amsler Grid Test, go to *www.i-care.net/Amsler.html*.

There's good news from the research front, however. A team of doctors of optometry from the Indiana University School of Optometry led by Dr. Merrill Allen has been researching both AMD and retinitis pigmentosa, another eye disease involving deterioration of the retina and vision loss. The doctors' program tested the following nutritional supplements against AMD:

- Beta-carotene ..... 40,000 IU
- Vitamin E (natural) ..... 400 IU
- Vitamin C ..... 1,500 mg
- Citrus bioflavonoid complex ..... 250 mg
- Quercetin ..... 100 mg
- Bilberry extract ..... 10 mg
- Rutin ..... 100 mg
- Zinc ..... 25 mg
- Selenium ..... 100 mcg
- Taurine ..... 200 mg
- N-acetylcysteine ..... 200 mg
- Glutathione ..... 10 mg
- Vitamin B complex ..... 250 mg

(*Note:* Retinitis pigmentosa patients received a different nutritional mix consisting of a multivitamin/mineral formula and 750 mg taurine, 300 mg bilberry, and 50 mg zinc daily.)

Forty-six patients with AMD were given this supplement regimen for two years. They also received micro-current electricity therapy with a Transcutaneous Electrical Nerve Stimulator (TENS) unit. The patients' vision would normally be expected to deteriorate during that time, but these patients actually showed an improvement. When tested using an eye chart, they had gained a remarkable average of 8.5 letters of acuity per eye.

A Stimulating Breakthrough

Studies have shown that micro-current electricity therapy improves blood flow and enhances the transfer of ions across cell membranes. This could, in turn, help deliver key nutrients to retinal tissues.

If you are interested in purchasing one of these micro-current stimulation devices, you can contact Altoona Medical Supply at 705 Second Ave., S.W.,

Ancient Indian Remedy for Ailing Vision

The natural beauty of parts of the Far East and India is always a fantastic sight to behold. The natural therapies I examine during my travels to China and India are always eye-opening. Now modern science suggests that two ancient remedies from these regions of the world might prove to be eye-healing as well.

Research emerging from this area shows that cataracts may be prevented and even reversed by two age-old therapies from the East: a traditional Chinese formula called Hachimijiogan (Liu Wei Di Huang Wan) and the Indian herbal compound triphala.

Triphala (tree-FAH-lah) has been widely prescribed in India for thousands of years. Modern practitioners of Ayurvedic medicine prescribe triphala—a combination of three herbs—for its antioxidant, detoxifying and restorative effects throughout the body, including vision. It seems to have a knack for bringing overall health into balance.

I'm keenly interested in triphala's potential for supporting eye health. In my explorations of this herbal trio, I found that Indians who practice Ayurvedic medicine often use it to treat failing vision and protect against cataracts. Its three ingredients are:

- Indian gooseberry (Amla in Hindi) has been said to have the highest vitamin C concentration of any known plant. This is important, because the lenses of your eye require over 20 times more vitamin C than the rest of your body.
- Beleric Myrobalan (Bibhitaki in Hindi) is thought to have a mild laxative effect, which helps to cleanse and detoxify the body.
- Indian gallnut (Haritaki in Hindi) is considered one of the most important Ayurvedic herbs. It is reported to have rejuvenation properties as well as the ability to improve digestion and vision, and heal ulcerated surfaces in the digestive tract.

Triphala comes in bulk powder and capsules. Both are equally effective, although capsules are more expensive because of the convenience. If you take the powder, mix one teaspoon with a small amount of hot water and let it steep for about 10 minutes, then take it just before bedtime. Because of its mild laxative effect, you may need to reduce the dosage. You may notice increased energy within a week or two, along with better digestion, improved blood pressure and cholesterol levels, and an overall sense of well-being. I suggest that you take triphala for a three-month period twice a year for optimal results.

Check Ayurvedic catalogs and health food stores for suppliers of triphala; one source that I've worked with for both bulk powder and capsules is Bazaar of India Imports, 800-261-7662, 1810 University Ave., Berkeley, CA 94703.

Altoona, IA 50009 (800-442-8367 or 515-967-6207). Ask for the 804MP model. Please note that you will need a doctor's prescription to purchase the product. Altoona will be happy to send you a packet of information to share with the doctor when you call. The 804MP costs $300, and there is a full, money-back guarantee.

For healing and repair to take place, adequate amounts of nutrients and other building blocks must also be present in the bloodstream. By including high quality supplements—especially those needed for vision—in your diet, you can greatly improve your odds of both preventing and reversing these eye diseases, just as these patients did.

Strengthen Your Eyes Against Cataracts

Each year, hundreds of thousands of people suffer vision impairment or even blindness due to cataracts, and over a half-million corrective surgeries take place annually. No matter what your age, there is much you can do to help prevent cataracts, slow their onset and, in some instances, even halt or reverse their progress.

How do they happen? The lens of your eye is always growing, but unlike your hair or nails, which can easily be trimmed away, your lens grows toward its center. This means that the oldest cells reside in the

Set Your Sights on Vision-Saving Foods

Although nutritional supplements are often considered the "big guns" in the battle against blindness, foods are the foot soldiers in the daily skirmishes against age-related vision loss. Load up your kitchen with these valuable allies and keep your sights on your goal—healthy vision for a lifetime.

1. Cultivate diversity at the dinner table. Green tea, green apples, red or white wine, onions, eggplant, and black currant juice are all rich in quercetin, a powerful antioxidant and bioflavonoid. Whole-food supplements rich in quercetin include blue-green algae and spirulina. Quercetin strengthens the walls of blood vessels in the eyes and helps protect against buildup of sorbitol, a type of sugar that can cause the lens to become less flexible and possibly more susceptible to cataracts. In addition, quercetin coupled with vitamin C may help reduce sinus congestion, reducing your reliance on anti-histamines which are implicated in the development of cataracts.
2. The power of garlic is well known, but its equally prolific cousin, the humble onion, is only now beginning to be recognized for its health-supporting merits. Both are rich in hundreds of bioflavonoid compounds that support the health of your heart, eyes, bones, and even your brain. (Chew on a few sprigs of parsley to counteract onion- or garlic-breath.) And here's a bonus: garlic and onions, both raw and cooked, will help you control your blood sugar, fending off chronic degenerative diseases like adult-onset (type II) diabetes as well as cardiovascular disease.
3. Eggs can help prevent macular degeneration; in fact, eating egg yolks significantly increases levels of the carotenoids zeaxanthin and lutein in the bloodstream, as do dark green leafy veggies such as spinach. It's really unfortunate that eggs got such a "bum rap" about two decades ago, because once a bogus health scare gets started, it's hard to override the bad press. Despite overwhelming evidence to the contrary, the medical profession still hasn't fully accepted the fact that eggs don't raise cholesterol levels and are, in fact, very good for you. I wonder how many eye problems might have been prevented had this misinformation never seen the light of day.
4. Carrots are an excellent source of beta-carotene, a well-known antioxidant. But carrots also contain more than 400 other types of carotenes—such as alpha-carotene, zeaxanthin, and cryptoxanthin. There is increasing evidence that it's the combined effects of these carotenes that make carrots and so many other brightly colored vegetables so beneficial.
5. Nuts, fresh cold-water fish, and flax seeds are rich in essential fatty acids that counteract bad fats, and cruciferous vegetables such as Brussels sprouts, cauliflower, cabbage, kale, bok choy, watercress, mustard greens, horseradish, turnips, rutabagas, and kohlrabi are teeming with glutathione, considered the "granddaddy" of antioxidants.
6. "Superfoods" are a special category of nutrient- and enzyme-dense foods. For example, superfoods contain carotenes plus high levels of other complexes, such as flavonoids, tocopherols, amino acids, and enzymes, in highly concentrated form, giving you large benefits from small amounts.

   Spirulina is a superfood belonging to the group of blue-green algae (another superfood, by the way). With all eight essential amino acids and high levels of vitamin B12, it surpasses raw wheat germ in levels of vitamin E and is an excellent source of essential fatty acids.

   In addition, spirulina is composed of dozens of pigments associated with healing. I've reviewed scores of research studies on spirulina, including one at the Tokyo College of Medicine and Dentistry that reported halting the progression of geriatric cataracts by adding spirulina to the patients' regular medications. In a few cases, the cataracts even cleared up completely. In serious cases, researchers used up to 20–30 grams of spirulina per day.

   You can find spirulina in most health food stores; two brands that I've come to trust are Earthrise and Kona Coast Hawaiian. I recommend approximately 750 mg daily.

Two other superfoods to consider are royal jelly and bee pollen. Bee pollen is a rich source of rutin, a bioflavonoid that helps strengthen capillary walls.

middle of the lens while the younger, more vigorous cells are positioned along the outside, where the richest blood and oxygen supply is found.

As the older cells die off, they begin to form an opaque area called a cataract. As a cataract grows larger, vision in that eye becomes progressively impaired. If you think the solution to cataracts is to increase the supply of oxygen and nutrients to the eye, you're on the right track.

Just as we saw with AMD, smoking, a high-fat diet, lack of exercise, and other lifestyle factors can increase your chances of getting cataracts. In fact, all of the poor habits and indiscretions that clog arteries and decrease cardiovascular circulation also take a toll on the lens. To help prevent cataracts or slow their progress, review the dietary recommendations I listed for AMD, and consider the following targeted nutrients, keeping in mind that no single nutrient can totally prevent cataracts. Your best bet is a lifestyle and diet that provide a complete, well-balanced supply of nutrients, improved circulation, and protection from pollutants and drugs.

Supporting Nutrients

Glutathione controls free radicals that can damage cells and accelerate the aging process. In fact, physicians found that those in the oldest age group studied (80 to 95), all still had high levels of glutathione. In the healthy eye, glutathione levels also remain high as it aids in the exchange of sodium, potassium, and calcium moving in and out of the lens cells. In addition, it prevents sulfur-containing proteins from oxidizing. When the exchange of these minerals is interrupted and/or the sulfur-containing proteins become oxidized, the lens of the eye becomes cloudy, and cataracts result.

Cruciferous vegetables provide the richest source of glutathione. This group includes Brussels sprouts, broccoli flowerettes, cauliflower, cabbage, kale, bok choy, watercress, mustard greens, horseradish, turnips, rutabagas, and kohlrabi. In addition, you can take supplements such as N-acetylcysteine, a more bioavailable form of glutathione. I recommend that you take approximately 250 mg daily.

The concentration of **vitamin C** in the fluid of the eye is among the highest in the body. Recent studies have shown that the lenses of your eye require up to 20 times more vitamin C than the rest of your body, especially as you age. Yet research is revealing that cataract patients have lower concentrations of vitamin C in the lens, and with increasing age, the eye becomes less permeable to vitamin C and more vulnerable to damaging UVB radiation from the sun. This chain of events has been implicated in the formation of cataracts. I recommend up to 2,000–2,200 mg per day.

Multiple studies support the role of **vitamin E** in protecting the eyes against cataracts. Taking it along with your C may have a synergistic effect on supporting vision. In research, vitamin E taken alone decreased the incidence of cataracts by 56 percent, while vitamin C alone reduced the incidence by 70 percent. Research indicates that cataract-free individuals took a combination of both nutrients daily.

Grapeseed extract, an antioxidant, supports collagen and elastin, the proteins that comprise the connective tissues of the eye. It also exhibits a neuroprotective effect and supports fine capillaries that when broken, lead to varicose veins. By a similar mechanism, grapeseed extract also lends support to the fine network of small blood vessels that serve the eye. I recommend a daily dose of at least 15–30 mg.

One of the dreaded complications of diabetes is diabetic retinopathy, which can progress to blindness. From Guatemala comes a tropical fruit that shows tremendous promise in studies for controlling diabetes and its complications. It's called **bitter melon**—aka bitter gourd, karela, and balsam pear. In research in India and Germany, results showed that extracts of bitter melon may be just as effective as insulin injections. A daily dose of bitter melon can lower glucose levels, provide pain relief from neurological complications, and delay the onset of cataracts. A powdered extract of this fruit can be ordered by your health food store from Enzymatic Therapy (800-783-2286).

Some research implicates low selenium levels in the development of cataracts. Indeed, studies show that selenium levels of the aqueous humour—the clear watery fluid circulating within the inner chamber of the eye between the cornea and the lens—are lower in people with cataracts. This indicates a lens unprotected against the damaging effects of lipid peroxidation. In addition, selenium may help raise levels of glutathione. Make sure your multivitamin complex or vision formula add up to 100–200 mcg selenium.

The amino acids cystine and histidine may help prevent cataracts. Cystine increases glutathione levels in the eye, which, like vitamin C, protects the lens from damaging UVB radiation. Animal studies have shown that when histidine is missing in the diet, cataracts

may develop in as little as three weeks. Yogurt, wheat germ, granola, oats, ricotta, cottage cheese, and eggs are among foods rich in these amino acids that help rebuild and maintain the eye's integrity.

Deficiencies of the trace mineral zinc have been linked to cataract formation. Make sure you are getting at least 20-40 mg per day in your multivitamin/mineral or vision formula.

Things to Avoid:

If you have been diagnosed with early cataracts or are concerned about their development, consider the following potential risk factors:

- **Topical steroids**—there is evidence that repeated use of steroids can increase risk of cataracts. This includes topical corticosteroid creams as well as systemic steroids.
- **Antihistamines**—although they have not directly been linked with cataract formation, their chronic use may interrupt the fragile blood supply to the eye, causing constriction of small vessels. While this can bring symptomatic relief to allergy sufferers, over the long run it may affect the circulation around your eyes.
- **Antibiotics**—preliminary reports from the University of Rochester indicate that the commonly prescribed antibiotic tetracycline can make the lens of the eye more susceptible to damage from ultraviolet light.

Lower Glaucoma Pressure Naturally

Glaucoma (sometimes called "stroke" of the optic nerve) refers to a complex of diseases marked by optic nerve damage which impairs vision. Most, but not all, of these diseases are characterized by elevated pressure within the eye (high intraocular pressure, or IOP), which can lead to pain, visual impairment, and even blindness. Often, no symptoms appear until permanent damage has occurred.

Risk factors for glaucoma include:

- history of diabetes
- long-term use of corticosteroids
- nearsightedness (myopia)
- family history of glaucoma (African Americans over age 40 are at particularly high risk)
- high intraocular pressure.

How does it happen? In the most common type of glaucoma, called angle-closure glaucoma, intraocular pressure can increase suddenly, causing a painful, acute attack. **If you ever experience intense pain that leads to unexplained nausea and vomiting, red eyes, swollen or cloudy corneas, halos or rainbow rings around lights, blurry vision, morning headaches or pain around your eyes when going from a dark to a bright area, please have your eyes checked at once.**

Help for Dry Eyes

One of the more frequent problems my readers report to me is "dry eyes." Often, beta-carotene supplementation will take care of the problem, and I've also recommended direct application of vitamin A drops to the eye. This can bring almost instant relief and may eliminate the problem when used over a period of several days. I've recommended a product called Viva-Drops from Vision Pharmaceuticals (800-325-6789) or check your local drug store.

By the way, "dry eyes" is one of the side effects sometimes associated with LASIK surgery, which has become very popular for correcting vision. Unfortunately, an even more serious side effect appears to be the loss of night vision. A Canadian surgeon, Dr. William Jory of Toronto, did follow-up exams on his patients two to seven years after surgery. He discovered that 58 percent of them had failed the contrast sensitivity test for night driving. Another night vision study, this one in England, found that 80 percent of people who had undergone LASIK surgery could not see a traffic sign at 55 meters, and 40 percent couldn't see the sign at 15 meters—roughly four car lengths.

Personally, I would be hesitant to risk my vision when there's even the slightest risk of permanent damage. I'll keep you posted on new or refined procedures as they become available.

Supporting Nutrients

Although surgery and medication can help lower eye pressure associated with many cases of glaucoma, vitamin C has been shown to help lower glaucoma pressure safely and without side effects. Patients with mild glaucoma who took 500 mg vitamin C four times per day (2,000 mg total daily) saw their eye pressure dramatically drop within six days.

Rutin may help support healthy intraocular pressure. Take at least 20 mg three times daily. (Many multivitamin/mineral supplements include this bioflavonoid.)

Alpha lipoic acid has the unique ability to help "recycle" other key antioxidants such as vitamins C and E and glutathione. In a study of glaucoma patients who received 150 mg alpha lipoic acid each

day, nearly half of the eyes improved their color visual fields and visual sensitivity, and more advanced cases had an even better response compared with controls. There is strong evidence that this nutrient may be useful in combination with B-complex vitamins and vitamin C.

Ginkgo biloba is showing potential in the treatment of glaucoma. There is evidence that it improves central and peripheral blood flow, reduces vasospasm and serum viscosity, has antioxidant activity, and inhibits platelets (clotting) and cell death (apoptosis). In one study, 40 mg of ginkgo given three times daily increased diastolic blood flow by 23 percent in the ophthalmic artery in glaucoma patients. Researchers believe it may be helpful in protecting the optic nerve from further damage and subsequent visual field loss.

Note: Please consult your physician before taking ginkgo or another herb, especially if you are taking a blood-thinning medication such as Coumadin.

Things to Avoid:

If you suffer from glaucoma, be careful about taking blood pressure-lowering medication at night as this can increase risk of blindness. A precipitous drop in blood pressure might restrict blood flow to the optic nerve, inviting further damage.

Food allergies might also exacerbate glaucoma. One study showed that 113 patients with chronic mild glaucoma had an immediate rise in pressure up to 20 mm Hg when given various food or exposed to certain allergens.

Check In With Your Eyes

We often take our eyesight for granted until it begins to slip away. Losing one's sight often begins insidiously: first, your night vision may begin to decline. You may notice some cloudiness or blurriness in your vision, see halos or wavy lines in sunlight or have the sense that your eyeglasses always seem dirty. Your depth perception might suffer as you lose your confidence on steps. If you experience any change in your vision, especially a sudden or rapidly progressive change, consult a qualified ophthalmologist at once.

Remember, anything that affects blood flow to your eyes can ultimately affect your vision. Heed the suggestions I've made in this special report, and make sure your daily multivitamin or vision formula contains baseline levels in the ranges recommended for you in the box below.

In future issues of *Alternatives*, I'll bring you the latest breaking research to keep you at the forefront of rapidly expanding knowledge not only for healthy vision but for overall good health. I hope and pray you will never lose your precious sight. You can start today by loading up with an array of fresh, colorful fruits and vegetables rich in the pigments that support your eyes and, at the same time, reviewing your intake of potentially harmful medications. I pledge to continue bringing you the best our planet has to offer.

Recommended Daily Levels of Nutrients for Vision Health

Vitamin A.....5,000-10,000 IU	Glutathione tripeptide or n-acetylcysteine.....250 mg	Zeaxanthin ..... 300-600 mcg
Eyebright ..... 50 mg	Bilberry extract .....80-160 mg	Glycine .....50-100 mg
Vitamin C .....2,000-2,200 mg	Vitamin B1 ..... 25-75 mg	Grapeseed extract ..... 15 mg
Zinc .....20-40 mg	Rutin ..... 10-100 mg	Cysteine .....200 mg
Citrus bioflavonoid complex .....40-100 mg	Vitamin B2 ..... 25-75 mg	Triphala complex ..... 50 mg
Selenium .....200-250 mcg	Lutein ..... 12-18 mg	Glutamine .....150 mg
Quercetin .....50-300 mg	Carrot powder (root) ..... 50 mg	Taurine .....200-700 mg
		Bee Pollen.....100 mg

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Mountain Home Publishing Special Report


Dr. David G. Williams

The Forgotten Arthritis Remedy That Costs Just $5 A Month

Constant joint pain, immobility, and/or stiffness can certainly affect a person's quality of life. As a society, we pretty much accept these conditions as a normal part of aging. And early studies support the belief that everyone over 20 experiences degenerative changes in the cartilage lining their joints—even if they feel no pain or stiffness—that are the result of wear and tear on joints. Those who have subjected their joints to more trauma through the years will have more damage.

By age 40, 90 percent of the population has definite signs of osteoarthritis ("wear-and-tear" arthritis) that can be detected by x-ray. But at 40, most won't yet experience characteristic arthritic symptoms, such as joint pain, stiffness, or immobility. *(JAMA 55;157:487)*

You Might Not Have Heard of Dr. Kaufman's Research

As a result of decades of work, Dr. William Kaufman discovered that a large percentage of crippling joint pain and mobility problems that had been considered "normal" to the aging process could be prevented and/or corrected with niacinamide, a common B vitamin.

Kaufman began studying the therapeutic effects of niacinamide in the mid-1930s. Earlier research revealed that niacinamide was necessary for forming two coenzymes crucial to more than 200 metabolic processes in the body, including producing energy for repairing cartilage.

The related problems were listed under the heading "aniacinamidosis" and included nervous system impairment resulting in depression, anxiety, and personality changes; impaired balance; overreaction to noise; fear of being hurt; abnormal skin sensations; yellow or brown skin pigmentation and excessive callus formation; liver enlargement and tenderness; changes in the mucous membranes of the mouth, tongue, and vagina; excessive fatigue; impaired joint mobility; tenderness of joint cartilage when touched; poor muscle strength; and diminished work capacity. By the early 1940s, Dr. Kaufman had found that each of these complaints could be readily corrected with proper oral dosages of niacinamide.

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Five Factors That Maximize Niacinamide's Effects—and What to Do About Them

Niacinamide is not a cure-all, and it will not work in every case. In some instances, joints have been so severely damaged that nothing can help. There are a few other circumstances I can think of that can interfere with niacinamide's effectiveness in treating arthritis and other conditions:

1) If you suffer from arthritis, I recommend a protein powder supplement. Cartilage is high in protein, and if you don't get enough of it, cartilage can't be repaired. There are dozens of protein products on the market, made with everything from eggs to blue-green algae. There's nothing wrong with these products, but keep in mind that if you're older, some ingredients can be difficult to digest.

   Whey-based protein seems to be easily digested by almost everyone, without the need for additional digestive enzymes. One of the most active and digestible is The Ultimate Whey Designer Protein, made by Next Nutrition. It comes in natural, chocolate, and vanilla flavors (I prefer vanilla and chocolate). A daily dose is one or two scoops (17–34 grams of whey protein) mixed with water or skim milk. It can be found in most health food stores. One of the least expensive mail-order suppliers I've found is Nutrition Express at 800-338-7979.

2) All B vitamins work in conjunction with each other. You can expect better results if you take niacinamide along with a good multivitamin containing a broad spectrum of B vitamins.

3) A joint will not heal properly if it is continually traumatized by repetitive use or abuse. For example, if you continue to jog, arthritis in a knee joint won't heal. Obesity also creates constant trauma to weight-bearing joints. One way to minimize routine joint pressure is to wear shoes with thick, shock-absorbing soles.

4) Many niacinamide products contain preservatives that can render them less effective. Whenever possible, buy organic.

5) One of the most common reasons niacinamide therapy fails has to do with the dosage. Niacinamide is quickly absorbed into the bloodstream and central nervous system. It also clears from the body quite rapidly. Body levels begin to rise within 15 minutes of taking niacinamide and peak about 90 minutes later (in severe cases of arthritis, levels may peak in one hour). Three hours after ingestion, most of it has been cleared from the body. For this reason, niacinamide must be taken at very regular intervals during the day, which necessitates planning and discipline.

His Timing Was Right

Dr. Kaufman's research took place at an opportune time in history. During the early 1940s, the amount of niacinamide in the American diet was being manipulated, which allowed him to make some extremely important observations. Before 1941, food staples like bread, flour, and cereal products were made from highly-processed, nutrient-empty white flour. Between 1941 and 1943, some manufacturers began to enrich these foods with niacinamide and other B vitamins. In 1943, the enrichment of bread, flour, and cereal became compulsory and remained so for the duration of World War II. Everyone was suddenly getting small doses of niacinamide in their daily diet.

During this period, Dr. Kaufman had evaluated hundreds of patients who suffered from the problems he had linked to aniacinamidosis. Once the enrichment program began, he found that many of the problems became far less common. Perhaps more significant, he found that some problems were **not** corrected by eating niacinamide-enriched foods. The answer in these cases was high doses of niacinamide.

His Work Was Meticulously Recorded

Much of the early research involving diet, nutrition, and vitamins was not very well-documented. Before computers and the availability of inexpensive lab tests, much research data were based on anecdotal evidence, such as patient testimonials or the impressions of the treating doctor. This wasn't the case with Dr. Kaufman's work. He went to extraordinary lengths to verify his findings and meticulously record each detail (by hand with the help of his research assistant, his wife Charlotte. Before computers, and with thousands of patients, this was a huge task.)

Dr. Kaufman documented hundreds of cases of severely immobilized arthritic patients who became mobile and self-sufficient after long-term niacinamide therapy. His case histories, supplemented with photos, show arthritic patients who could not raise their arms above shoulder level before treatment. After several months on niacinamide, they could raise them above their heads.

These patients also reported a decrease in joint pain and inflammation. Niacinamide is not considered an anti-inflammatory compound or analgesic, but apparently its ability to trigger actual repair of joint surfaces dramatically reduces pain and inflammation. Considering the side effects and risks associated with anti-inflammatory drugs, niacinamide is a welcome alternative.

How and When to Use Niacinamide to Improve Joint Dysfunction

Like many things in life, having a tool solves only part of the problem—the key is knowing how to use the tool. Such is the case with niacinamide. When the right niacinamide is taken correctly, it can cause some amazing psychological and physical transformations.

For moderate joint dysfunction, the recommended dosage of niacinamide is 250 mg every three hours for six dosages. This equals 1,500 mg of niacinamide a day, taken over an 18-hour period. This is the dosage Dr. Kaufman and his wife were on for 60 years, until his death in 2000 at age 88. For severe joint dysfunction, the recommended dosage is 250 mg every two hours for eight dosages. This adds up to a total of 2,000 mg a day, taken over a 16-hour period.

For extremely severe joint dysfunction, the recommended dosage is 250 mg every one-and-a-half hours for 10 doses, making a total of 2,500 mg a day. (In these cases the dosage may even be increased to 250 mg every hour for 16 hours, for a total of 4,000 mg a day.)

Note: Dr. Kaufman developed very thorough tests to determine whether a patient had moderate, severe, or extremely severe joint dysfunction. (These tests are clearly outlined in his journals and other works.)

As mentioned earlier, taking niacinamide at regular intervals—not just the correct dosage amounts—must be closely monitored. For example, taking 500 mg three times a day works out to 1,500 mg, but the effects will not be nearly as effective as taking 250 mg every three hours. Dr. Kaufman's protocols are designed to keep blood levels consistent throughout the day. For the most part, niacinamide works gradually and gently. You may not notice changes right away, but it is important that you stay with the program. Even after symptoms have improved, Dr. Kaufman felt that a maintenance dose of 250 mg every three hours, six times daily should be taken for life.

A good source for niacinamide tablets that contain no preservatives, fillers, or excipients is Freeda Vitamins, at 800-777-3737 (mention you're an *Alternatives* subscriber and receive 20 percent off your order).

A Word About "Time-Released" Supplements

To make it easier to take high doses of niacinamide, some companies have come out

with time-released niacinamide products. I do not recommend taking them because time-released products can cause liver problems and you would need to get periodic tests to monitor your liver function. Taking straight niacinamide using Dr. Kaufman's protocol outlined above has never caused liver problems or other side effects. Apparently, the carefully balanced blood levels make it easy for both liver and kidneys to deal with the higher levels of niacinamide.

What About Glucosamine and Chondroitin?

I first wrote about the regenerative powers of chondroitin and glucosamine sulfates in 1992 and 1994, respectively, and I have been gratified to read the hundreds of letters over the years describing how these natural agents have helped so many of my readers. The popularity of chondroitin and glucosamine has now expanded beyond the readership of *Alternatives*, as I'm sure you can tell if you've visited any bookstores or health food stores recently.

Glucosamine sulfate works by building the proteins that make up healthy cartilage. These proteins bind to water, which is critical for proper joint lubrication. Stiffness and aching in joints are signs that these essential proteins are breaking down and, consequently, your cartilage is eroding. To prevent this erosion, chondroitin sulfate provides a constant supply of the nutrients needed to repair damaged protein and build new protein. These fluids also serve as shock absorbers.

Unfortunately, there seems to be a large group of individuals for whom glucosamine and chondroitin sulfates provide little, if any, relief. Ever since I first introduced these substances, I've been investigating why this is the case. I believe I have found the answer.

While glucosamine and chondroitin sulfates are essential for healthy joints, they are just two members of a much larger family of mucopolysaccharides that are naturally found in all joint cartilage. Other compounds in the family include heparan sulfate, heparin, dermatan sulfate, keratan sulfate, and hyaluronan.

Like so many nutrient families, sulfates work most effectively when they are taken together, as they occur in nature. A good example is the B family. Each B vitamin is beneficial in its own way. But most people now recognize the superiority of taking a B complex. We're now learning that the same is true of the sulfate family. Isolating glucosamine and chondroitin is a step in the right direction, but it's only the

Leach Pain From Arthritic Joints

Researchers have now found that leeches can be used to relieve osteoarthritis pain. Osteoarthritis is the form of arthritis also known as "wear and tear" arthritis.

Doctors at the University of Essen hospital recruited 16 patients with osteoarthritis of the knee joint. Ten in the group were treated with leeches, while six served as controls.

Four leeches (*Hirudo medicinalis*) were applied topically to the most painful spots around the joint. There were no complications. The patients were evaluated for any changes in pain for each of the following 10 days and then at 28 days. All of those treated with leeches reported rapid pain reduction and sustained improvement at the 28-day mark. *(Altern Ther Health Med 02;8(5):84-8)* This is not surprising. While sucking blood, leeches release both an anticoagulant and an anesthetic compound into the host's bloodstream.

Leech therapy has been around practically forever. It's still being used successfully in parts of Asia, Africa, and some Arabic countries. I don't know if it will ever gain widespread acceptance in this part of the world, but it works. Leeches are sold through Leeches U.S.A. *(www.leechesusa.com)* and other providers, but they're available only to medical personnel and hospitals, so you'll need to obtain them *through* your doctor.

Magnets—Helpful or Harmful?

In the last few years, dozens of magnet products have come on the market—shoe inserts, belts, blankets, pillows, headbands, wristbands, and knee wraps, to name a few. While doctors are starting to endorse and recommend magnet products, most are honest enough to say they don't understand how or why the magnets work. Yet, in the next breath they proclaim them to be harmless. That may not always be the case.

A great deal of research has been done on the biological effects of magnets, which shows that the effects of a magnet depend on several factors, most importantly, which pole is placed against the body. All magnets have two poles, north and south. The energy field from the north pole has a counter-clockwise rotation, while that of the south pole has a clockwise rotation. The two energy fields affect the cells in your body in totally different ways. For example, energy from the north pole of a magnet *decreases* pain and inflammation, while that from the south pole *increases* pain and inflammation. Some products on the market fail to make that distinction. Even worse, energy from the south pole of a magnet can increase tissue growth, which is certainly something you wouldn't want to happen if there was cancerous tissue underlying the area.

You can use a compass to tell which end of the magnet is north and which is south. Place the compass close to the magnet. The end of the needle that would normally point toward the North Pole of the earth will point toward the south pole of the magnet.

I certainly think magnets have a place in healing and can be great tools, but if you're going to use them, you need to be knowledgeable about their benefits, as well as their negative aspects. Keep in mind, too, that pain is a sign that something is wrong. Blocking pain without discovering the underlying cause isn't the solution; it's only treating a symptom. If the smoke alarm in your house went off during the middle of the night, it would be far wiser to determine what caused the alarm, rather than simply unplugging it or removing the battery. The same holds true with pain, your body's innate alarm system.

tip of the healing iceberg that the entire sulfate family can provide.

Many people have problems digesting glucosamine and chondroitin. Because sulfates can be difficult to break down, I also recommend active forms of the enzymes bromelain and papain to help take some of the stress off of the digestive system and ensure that the cartilage components are properly absorbed.

I've written at length about these enzymes in the past, primarily because of their ability to improve digestion and absorption. In addition, bromelain, in and of itself, has powerful anti-inflammatory capabilities, primarily due to its dual effect on prostaglandins (fatty acids that work like hormones in the body). Bromelain both inhibits the formation of prostaglandins that increase inflammation and promotes the formation of prostaglandins that have anti-inflammatory effects. I recommend bromelain and papain products from Enzymatic Therapy. Enzymatic Therapy sells directly to physicians and health food stores. To find a location near you, call 800-783-2286.

Rub on Fast Relief

What do hot peppers and pain relief have in common? Capsaicin—the chemical that gives cayenne pepper its fiery nature. A powerful, natural pain-fighter, capsaicin has been used in foods and herbal medicine since ancient times. In more recent years, scientists have studied its ability to relieve joint, back, and muscle aches. In one double-blind study, 80 percent of patients

experienced pain relief after two weeks of treatment with a cream containing capsaicin. And in another study, capsaicin reduced joint tenderness and stiffness specifically in patients' hands. This is why capsaicin is found in so many pain-fighting creams.

But there's one big problem. Most people who put on a capsaicin cream feel a burning sensation, sometimes worse than the arthritis pain. I spent more than three years researching and testing natural ingredients that would help combat the burning sensation of capsaicin. The result—a pain-fighting cream called Natural Pain Advantage that gives fast comfort and relief for joint and muscle aches and arthritis pain, without burning. In fact, you actually will feel a *cooling* sensation due to the essential oils and native Australian herbs like aniseed myrtle oil, mountain pepper, and *Aloe vera*.

When you compare Natural Pain Advantage to other capsaicin creams, you'll see that with the other creams you have to rub and rub until the cows come home to get the cream absorbed into your skin. And as if getting a whiff of the stuff while you're putting it on isn't bad enough, you have to walk around for hours afterwards smelling like a medicine cabinet. With Natural Pain Advantage, you only have to gently rub the cream on your skin; it will absorb quickly and penetrate deep into the skin, without leaving any greasy, smelly mess.

Capsaicin cream is widely available. But the Australian herbs in Natural Pain Advantage are hard to find outside of Australia. The only source in the U.S. for ordering Natural Pain Advantage is Mountain Home Nutritionals, 888-887-8262 or **www.drdavidwilliams.com**.

Instant Cure for Muscle Pain

DMSO (dimethylsulfoxide) is a clear, colorless, slightly oily liquid with a faint smell of sulphur. It has the unique ability to pass through the skin's oily membranes, which has proven to be handy in a number of different health applications. DMSO on its own can reduce swelling, inflammation, and pain. It can speed the healing process, preserve tissue, and be a godsend to individuals suffering from serious pain. Acute pain from a sports injury can generally be relieved by DMSO in as little as 5 to 30 minutes.

I recommend that every reader keep a pint of 99.9 percent pure DMSO on hand. DMSO is sold in both liquid and gel form. I recommend liquid DMSO. DMSO should always be diluted with distilled water. It works best, in the majority of conditions, when it is in 70 to 90 percent concentrations—70 percent DMSO and 30 percent distilled water, or 90 percent DMSO and 10 percent distilled water. (Burns are the only injury that seem to respond well to a 100 percent solution.) Also, keep in mind that when you dilute DMSO with water, a chemical reaction will take place and the mixture will become warm. This is normal.

DMSO is applied directly to the skin. You can apply it with your fingers or a cotton ball or swab. Most authorities suggest dabbing DMSO onto an area, but rubbing it on has been shown to improve the absorption time by up to 50 percent. A typical application is 1–3 teaspoons. For acute injuries, applying DMSO every two hours for six to eight

End Leg Cramps With Pickle Juice

Health Hint: The NFL Philadelphia Eagles drink two ounces of pickle juice before football games to prevent muscle cramps and improve their performance. A simple remedy for muscle cramps is eating a slice of sour pickle; the cramp is gone in about 60 seconds. It also is supposed to prevent pulled hamstrings. Some athletic trainers say that this is a grandma formula, but if it works, do it.

— Dan P., Duncanville, Texas

hours following the injury is usually recommended. For the next five days or so, apply once every four to six hours.

Many health food stores now carry DMSO labeled as "laboratory grade" 99.9 percent pure. It will be labeled for use as a solvent, not a drug. A good mail order source is DMSO Marketing, 800-367-6935 or 502-347-5767. Remember, they cannot tell you how to use the product, so keep this report handy for reference.

Take "Charge" of Your Health—Literally

Every single living cell within the body has both a positive and negative charge. It is the balance of these charges that results in good health. An imbalance leads to malfunction and varying degrees of disease.

If an area of the body has a predominately negative charge, you'll find that the tissues are more alkaline. There will be decreased blood circulation to the area, resulting in lower temperatures.

If an area has a predominately positive charge, it is an indication of overactivity in the area. This is usually accompanied by excess acids in the tissues, along with inflammation, swelling, heat, and pain. Headaches, joint and muscle inflammation (like arthritis and tendonitis), and most of the other common ailments we experience fit into this category. To help reverse these problems, we can introduce additional negatively-charged particles (electrons) to the area.

I'm sure you've experienced an electrical shock caused by the static electricity created when scooting across carpet. As you scoot across the carpet, nylon fibers pick up and store electrons from your feet, leaving you "imbalanced." When you touch a doorknob or other conducting object, you experience an electrical spark that equalizes the charge in your body. The same principle takes place when you rub a comb or a balloon against your sweater and your hair stands on end—your hair stands on end in an attempt to equalize your body's charge. Most people don't realize this same static electricity can be used to alleviate a lot of pain and suffering.

Here's How To Harness Static Electricity

One of the easiest ways to create a fairly large amount of usable negative electrons is with PVC (poly vinyl chloride) plumbing pipe and a small piece of fuzzy material. You can purchase PVC pipe from any lumber yard, building supply company, or plumber. All you need is an 18-inch piece of one-and-a-half pipe. (If you know a friendly plumber, you can probably get the PVC free. At that length it's usually considered to be scrap.) For the fuzzy material, one of the best seems to be that wild-looking polyester fake fur that comes in so many outlandish colors, and can be found in fabric or craft stores.

To create a charge of static electricity, simply take the PVC pipe in one hand and rub the piece of fuzzy material back and forth along the pipe. Then, to treat your pain, move the charged PVC pipe slowly back and forth over the painful area, keeping it about a half-inch to an inch or so from the surface of the skin. After three or four passes, recharge the pipe by rubbing it against the material again. (If you happen to touch the pipe to your skin or other object in the process, you won't get a shock, but you will need to recharge it again at that time.) Repeat the process until you feel relief.

The results can be quite dramatic. Most people begin to feel a noticeable improvement within five to seven minutes. More stubborn problems, like severe headaches, may take as long as 15 minutes. There's no set time period for treating a problem, so you can treat an area as long and as often as you need to (without the FDA's approval, I might add).

Simplicity, Effectiveness, Safety and Value: Four Hallmarks of a Great Therapy

Obviously, using this therapy isn't akin to brain surgery, and it doesn't require a great deal of skill. In fact, many people may be reluctant to give it a try because it's so low-tech and simple. I urge you not to discount it for this reason. Believe me, it's a great way to help relieve pain.

Maybe if we gave it a fancy name like electrostatic therapy, electrical spark gap therapy, or electromagnetic balancing it would seem more legitimate to skeptics. (Don't be surprised, however, if the plumber gives you a funny look when you tell him the PVC pipe is for "electrostatic therapy.") Regardless of what name you choose, it's certainly the type of technique I like. It's simple, it does no harm, it's inexpensive, and it works.

Publisher's note: Dr. Williams works closely with Mountain Home Nutritionals, developing his unique formulations that supply many of the hard-to-find nutrients he recommends. The compensation he receives allows him to continue devoting his life to worldwide research and the development of innovative, effective health solutions.

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FOR THE HEALTH-CONSCIOUS INDIVIDUAL
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Dr. David G. Williams

The Natural Potency Pill

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It has been estimated that up to 50 percent of U.S. adult men experience erectile dysfunction, also known as impotence. There are dozens of causes of impotence. Stress, diabetes, prostate enlargement, multiple sclerosis, anemia, and nutritional deficiencies (like zinc) are just a few of the possibilities. And, one of the most overlooked causes is the use of prescription medications. If you suffer from impotence and can rule these out as possible causes for you, then you may want to consider some of the natural treatment options outlined in this report.

The Sexual Effects of L-Arginine

Over the last several years something very exciting has been happening in the medical research community. Scientists are beginning to discover the amazing healing powers of certain amino acids. Arginine is one of the more important ones. The benefits that can come from arginine—including help for impotence—are staggering.

As a bit of background, amino acids are building blocks that make up proteins. The body requires around 22 of these amino acids to make human protein. It can actually produce 14 of these, but the other eight must come from food sources and are, therefore, considered "essential" amino acids. Arginine is generally considered a nonessential amino acid; it can be synthesized from a dietary amino acid called citrulline. (I don't want to get too technical here, but if I left out this little tidbit about citrulline, I wouldn't be able to tell my watermelon story later.)

Although arginine is considered nonessential and theoretically your body should be able to synthesize all you need, researchers are finding that in many people this doesn't happen. They've recently found that arginine is responsible for such a wide variety of critical functions throughout the body that it's not that uncommon for it to be in short supply when it fights disease. And, to their amazement, researchers have also found that many health conditions can be greatly improved or sometimes even eliminated simply by increasing levels of this basic compound, particularly in its L-arginine form. One such condition is impotence.

Impotence

When it comes to impotence, arginine gives new meaning to the phrase, "Just Say NO." In the last few years, researchers have discovered an important messenger molecule in the body—nitric oxide (NO).

Practically every event that takes place in your body must be initiated by some form of cellular messenger. For decades it was believed that chemicals like acetylcholine were the main messengers. For example, a message from the brain that starts as an electrical impulse travels down a nerve until it reaches a synapse, or gap between two nerves. The chemical acetylcholine then carries the message across the gap to the next nerve. Chemical messengers or neurotransmitters like acetylcholine are relatively easy to isolate and have been studied extensively for years.

In certain body functions, however, scientists were never able to determine how the organ or cell received the message. The ability of males to achieve an erection was one such function. What the scientists did know is for an erection to occur the muscles in the blood vessel walls of the penis had to relax to allow blood to flood the organ. They also knew something had to trigger the muscle relaxation, and though they didn't know the exact mechanism, everyone agreed that blood vessels must contain a smooth muscle relaxing factor, or as it is more commonly known, an endothelium-derived relaxing factor (EDRF).

Based on the fact that nitroglycerin used by heart patients breaks down into NO, researchers surmised that the mystery EDRF might be NO. NO is constantly being produced in little puffs by the smooth muscles that line blood vessels. It enters the bloodstream where it is rapidly destroyed by the blood's hemoglobin. The whole process lasts only two to three seconds, which makes it almost impossible for researchers to detect.

By using the same machine that measures nitric oxide in automobile exhaust fumes, they found the cells were giving off the gas. When the muscles in the blood vessels were flooded with NO, they relaxed or dilated and blood flow increased dramatically. When they were prevented from making the gas, blood vessels constricted and blood pressure went through the roof.

Interesting story, right, but how does it relate to impotence, and more importantly, arginine? Well, it just so happens that nitric acid is produced from the breakdown of arginine. Clinical studies have revealed that increasing arginine levels can help relax blood vessels in the penis, greatly increasing the chance of an erection. *(Int J Impot Res 94;6(1):33-5)*

How to Take L-Arginine

At present no one knows exactly what dosage level of oral L-arginine would be necessary to treat impotence. Earlier studies have demonstrated that 4 grams *daily* (4,000 mg) could increase both sperm count and motility in about half of the men that take it. *(J Urol 73;110:311-313)* Some feel that even better results could be obtained by using larger dosages of 10–20 grams daily.

Based on the above and other studies, a daily dosage of 12–15 grams of arginine would probably be in the ballpark for treating impotence. It should be taken on an empty stomach and best results might be obtained if taken an hour or two before bedtime or making love. There are a couple of synergistic nutrients that you might want to consider also.

Taking choline (500–1,000 mg daily) and vitamin B5 or pantothenic acid (500–1,000 mg

Sex and Heart Disease: The Circulation Link

Heart disease remains the number-one killer in the U.S. and most Westernized countries, but most men aren't aware of one of the most tell-tale signs of the impending danger. Even before experiencing chest pain or angina, which is generally considered the first warning flag, many men will experience erectile dysfunction (ED). That should immediately be considered an almost sure sign of having cardiovascular disease. (I say "almost" because a small percentage of ED cases are caused by psychological factors.) *(Int J Impot Res 03:15(4):231-6)*

The same circulation problems that cause ED will also limit proper circulation to the heart. The pharmaceutical companies are aware of this. Drugs for the treatment of high cholesterol, high blood pressure, and heart problems are always among their top sellers, so it shouldn't come as any surprise that products like Viagra, Cialis, and Levitra have also become major homeruns in the marketplace. Unfortunately, these drugs only treat the symptoms, not the underlying problem of poor circulation. And, even worse, most men feel they are correcting the problem instead of recognizing it as a tell-tale sign of a deeper, more life-threatening disease. (These ED drugs work mainly by increasing the production of nitric oxide, which in turn relaxes the muscles in the walls of blood vessels, allowing an increase in blood flow. And while they may be successful in doing so in the urinary tract, it is only a temporary effect and it doesn't have the same effect on the heart muscle. It would be very reasonable to assume that the men in which these drugs were unsuccessful probably have some very serious circulation problems and need to immediately change their nutrition, lifestyle, etc.)

One of the best methods of naturally increasing nitric oxide is exercise. Studies have found that ED is worse in men who spend most of their days in sitting positions (taxi and bus drivers are at high risk) or in high-stress situations.

daily) will help ensure that adequate raw materials are available for the production of acetylcholine. Keep in mind that many of the B vitamins work together and long-term ingestion of just one may lead to the depletion of others. In this particular case, it might be prudent to take a multivitamin, which contains the various Bs or a B-complex, along with vitamin B5 and choline.

It is not recommended that these high dosages of L-arginine and vitamins be consumed from the start. To avoid possible nausea or stomachaches, begin with about one-fourth the recommended dosages and gradually, over several days, work up to the full amounts.

Sources of L-arginine

Certain foods contain L-arginine. However, therapeutic doses are hard to get directly from food and some of the foods are not highly recommended. For example, pork is one of the richest sources, but a pound contains only a little over 5 grams of arginine. A pound of chicken has 1.5 grams, while a pound of turkey or duck has about 2.5 grams.

Non-meat sources include: wheat germ (2.7 grams per cup), ricotta cheese (1.6 grams per cup), and cottage cheese (1.4 grams per cup).

Earlier I mentioned the amino acid citrulline. The body can convert this amino acid into L-arginine and one of the foods richest in this

A Natural Way to Boost Libido

If you're looking for a safe, simple way to improve your libido, you might try royal jelly. Royal jelly is a glandular secretion made by worker bees. Fed to a selected ordinary female bee, it transforms her into the queen. It turns out to be pretty miraculous stuff. On this diet alone, the new queen grows to 1½ times the size of ordinary bees and lives over four years, compared to the normal bee life span of forty days!

Royal jelly contains an abundance of minerals, essential amino acids, acetylcholine, vitamins A, C, D, and E, testosterone, and most B-vitamins. In fact it is the richest source of pantothenic acid or vitamin B5. Its testosterone content has been reported to help increase libido. *(Journal of Nut. 57;63:591-99)*

Collecting and processing difficulties make royal jelly somewhat expensive. Premier One Royal Jelly sells products with varying potencies in either the natural jelly form or in capsules. You can find their products in health food stores, or they can be ordered from The Vitamin Shoppe at 800-223-1216 or *www.vitaminshoppe.com.*

citrulline happens to be watermelon. (Every 100 g of watermelon contains 100 mg of citrulline. You might have to eat two or three pretty good-sized melons to get much benefit, but at least you now know watermelon has other benefits besides being an excellent diuretic.)

An excellent source (inexpensive and high quality) for L-arginine is Jo Mar Laboratories, at 800-538-4545. I would recommend buying L-arginine in the free base form for best results. Jo Mar carries the free base form in capsules or bulk powder. (The fine people at Jo Mar have been kind enough to give first time buyers who are *Alternatives* subscribers a 10 percent discount on their first order.)

For choline and vitamin B5, I would recommend Vitamin Research Products at 800-877-2447.

The Magic of Muira Puama

Locals in Brazil have informed us about the power of a common shrub that they call "potency wood." Its proper name is muira puama *(Ptychopetalum olacoides)*. Crude forms of the plant have been used as both an aphrodisiac and as a stimulant to the nervous system.

At the First International Congress of Ethnopharmacology in Strasburg, France (1990), Dr. Jacques Waynberg reported using an extract of muira puama on over 250 patients with erection problems. Using 1 to 1.5 grams daily of that extract, the majority of the patients (62 percent) began to report an increase in libido. Erection problems were improved in 51 percent. No significant side effects were noted.

The exact extract used by Dr. Waynberg was never commercially marketed to our knowledge; however, other muira puama products have recently become available in this country. One product, Masculex No. 865 P.S.E., is being marketed by Enzymatic Therapy. Each capsule contains 125 mg of muira puama extract along with several other ingredients beneficial to the prostate and other male sexual organs. If your health food store doesn't carry the product, you can call Enzymatic Therapy at 800-783-2286 for the location of a supplier in your area.

Amino Acid & Botanical Supply, 800-952-7921, also carries a muira puama product in the form of a tincture called Horsepower #3.

Tongkat Ali: A Natural Way to Treat Impotence and Migraine Pain, Too

Several years ago, I established connections to begin work with some medical researchers from two universities in Malaysia. At the time, they were doing research to determine the effectiveness of several traditional, native medicines. As often happens, governments change, priorities change, and these projects never happen. I wasn't sure if their project was going to continue, but after some recent discussions and travels, it appears that it is still alive and well.

One branch of the Malaysian researchers' studies involved tongkat ali, which is a native medicinal plant. The slender, red-stemmed jungle plant can grow up to 30 feet high. The tuber-like roots of the plant contain the medicinal compounds. The long, twisted roots often resemble a walking cane, or "tongkat," as it is called in Malaysia. (Don't be surprised if you get a strange look when you mention the word tongkat in Malaysia. In one rather embarrassing situation, I learned that tongkat is also a slang word for penis.) In Indonesia tongkat ali is called pasak bumi. The proper scientific name is *Eurycoma longfolia* or *Eurycoma longfolia Jack.*

The herb has traditionally been used throughout Southeast Asia for everything from headaches to fatigue, malaria fever, labor pain, and arthritis. For hundreds of years, the coffee-like liquid made from the roots of the plant has also been used by the indigenous populations as an aphrodisiac. It is widely accepted in this part of the world that the drink increases male virility and sexual prowess.

While much of the research on tongkat ali has been performed in Malaysia, herbalists in Vietnam and Indonesia also have a great deal of experience with the herb. Universities in Malaysia, Indonesia, Thailand, Singapore, Vietnam, Japan, and the United States also have been testing the effects of extracts of the tongkat ali root. To date, most of the completed studies involve animals, but human trials are now underway.

Results thus far indicate that tongkat ali extract does indeed enhance male libido and sexual motivation, virility, penile erections, and sexual performance. *(Fundam Clin Pharmacol 02;16(6):479-83) (J Basic Clin Physiol Pharmacol 02;13(3):249-54) (Adv Contracept Deliv Syst 94:10(3-4):355-63) (Arch Pharm Res 01;24(5):437-47) (Fundam Clin Pharmacol 01;15(4):265-8) (Phytother Res 01;15(5):435-6) (Exp Anim 00;49(1):35-8) (Bio Pharm Bull 98;21(2):153-5) (Exp Anim 97;46(4):287-90) (Planta Med 95;61(2):177-8)*

Like many traditional remedies, the exact mechanism by which tongkat ali enhances libido isn't fully known. It will take more research to determine its full mode of action. The above studies have shown, however, that with increased dosing, the aqueous (water) extract of the root can increase testosterone levels by as much as 400 percent compared to base levels.

Some of the research also indicated that there was increased growth in several of the male accessory organs after the use of tongkat ali, but the size increase was less than that experienced with supplemental testosterone use. And though I haven't seen or heard of any reports of adverse reactions, it would be reasonable to assume that use of the herb would be contraindicated in any condition that might be adversely affected by an increase in testosterone levels. As such, it's generally not recommended for pregnant or nursing mothers or for men with prostate cancer.

How to Find and Use Tongkat Ali

Traditionally, the root of the tongkat ali plant is chipped into small pieces, boiled for about 30 minutes, and then discarded. The remaining liquid is much like coffee (except it is very bitter). I prefer the powdered extract of the tongkat root, which is far more convenient and pleasant to take. The extract powder is actually a 50:1 extract of the water-soluble components of the tongkat ali root. It is made by the same members of the two universities in Malaysia that performed many of the above studies.

Until recently, you had to live in certain parts of Asia to find a source for this plant. Fortunately, there is now a reliable source available in the U.S., which I will tell you about shortly.

The most certain source I've found is an Indonesian company that will ship both the raw root chips and the proper extract anywhere in the world. Because it is a wholesaler, the minimum quantities that must be purchased are large, and the extract powder is in bulk powder form. The company is Sumatra Pasak Bumi. Address: Jl. Letda. Sujono, Medan, 20225, Indonesia. Phone: + 62 81361410855. Web site: *www.Pasakbumi.com.* The minimum amount of powdered root extract you can order is 80 grams, which sells for $120. The length of time this will last depends on what the tongkat ali is being used for.

If you prefer to order from a company in the U.S., you can contact Potentherbs.com at 800-711-6323 or *www.potentherbs.com.* They sell a product by Doctor's A-Z called LongJaX. Each capsule of LongJaX contains 400 mg of concentrated 20:1 extract.

(*Note:* Many companies sell products containing powdered root, which is not the extract. Unlike the extract, it is not a concentrate of the active ingredients and won't give the same effect. It contains a high degree of cellulose and other root components. I don't recommend its use.)

Based on the evidence, to treat problems like migraine, fatigue, or malaria fever, a dose of approximately 500 mg per day of 50:1 extract powder is required (or 3 capsules of LongJaX). To increase sexual function, the recommended dosage is generally twice or three times this amount (in other words, 1,000–1,500 mg of the 50:1 extract per day or 6–9 capsules of LongJaX).

Since the powder comes in bulk form from Sumatra Pasak Bumi, you would have to measure the powder on a scale to get an exact daily dosage. Short of that, a good estimate is that one level teaspoon weighs approximately two grams. Therefore, a 500 mg dose equates to about ¼ teaspoon, a 1,000-mg dose is roughly ½ teaspoon, and so on. You could buy an inexpensive encapsulating machine, and put the powder in capsules. An easier solution would be to simply add the powdered extract to a small amount of warm water and drink it. I would suggest dividing the total daily dosage into two parts and taking it at different times of the day on an empty stomach.

Yohimbine Is Another Option, But It's Not For Everyone

Even though I wrote about an African herb known as yohimbine years ago, I was hesitant to recommend its use—mainly because I couldn't find a quality product on the market. Fortunately, I have now found a reliable source, which I'll tell you about in a moment. But, first, let's take a look at how yohimbine works and why it may not be the best option for everyone.

Yohimbine *(Corynanthe yohimbe),* an alkaloid from the bark of the Yohimbe tree, works through the nervous system, which controls the

dilation and contraction of the blood vessels supplying the pelvic region and the penis. It causes the blood vessels to dilate, which increases blood flow into the penis. At the same time, it shuts the small exit valves that would normally let the blood exit the penis.

The downside is that whenever you impede blood flow in the body you also increase blood pressure. That's why I wouldn't recommend that you take yohimbine if you have high blood pressure. For the same reason, you shouldn't take yohimbine if you have either kidney or liver disease.

Refined and concentrated yohimbine has been sold as a prescription drug for quite some time. It occasionally causes excessive sweating, nausea, and vomiting. However, I have never seen these problems with anyone taking the herbal extracts.

Studies have shown that for men with intermittent impotence problems yohimbine can be effective in over 60 percent of the cases. And, even in more severe impotence cases resulting from diseases like diabetes, it can help as much as 25 percent of the time.

In the '60s, some individuals used yohimbine as a natural way to achieve a mild "high." Studies have shown that yohimbine has both mood enhancing and energizing capabilities. Keep in mind that these are mild, temporary effects and nothing that should frighten you away from trying this herb. However, since it does affect moods, yohimbine isn't recommended for individuals who are on antipsychotic medication.

A Source for Yohimbine

The product that I can now recommend is a liquid extract being made by Gaia Herbs. The product is called Yohimbe Bark (made from the bark of the Yohimbe tree) and is available at health food stores nationwide. To find a store near you that carries this product, you can call Gaia Herbs at 800-831-7780 or visit *www.gaiaherbs.com.*

You can get yohimbe bark extract from other sources, and you can get it in capsule form. However, I prefer the liquid by Gaia. The Gaia product is of high quality, and the liquid is far more convenient and makes adjusting the dosage easier. I also think it is more stable and reliable.

Spice Up Your Love Life While Protecting Your Prostate

Zinc plays a major role in prostate health. It is just one of the trace minerals you're sure to be hearing more about in the years to come. Unlike the major minerals such as calcium or iron, trace minerals are hard to measure in the body. Zinc for example, is stored in the eyes, sperm, skin, hair, fingernails, toenails, white blood cells, pancreas, and of course the prostate gland which contains more zinc than any other part of the body. Researchers have analyzed zinc levels in the blood, hair, liver, and urine, but nobody really knows what the ideal levels should be. They do know, however, that zinc deficiencies can cause a wide variety of problems—especially prostate problems.

Zinc can help stop the conversion of testosterone into hormones that increase prostate growth. Most studies I've seen use at least 15 mg of zinc once a day. One good source of zinc (as well as the essential fatty acids necessary for normal prostate function) is pumpkin seeds. But oysters, known for their aphrodisiac effects, are the best food source for the trace mineral, packed with up to 150 mg of zinc per 100 grams.

An appropriate dosage for the liquid extract can vary from 20 to 30 drops taken one hour before sexual relations. Twenty drops are usually sufficient for a man who weighs around 150 pounds. Those who are heavier may need to increase the dose. In any event, if you don't see any improvement by the time you get to 40 to 50 drops, then yohimbine is probably not going to work for you.

After taking the drops, you should begin to notice a difference in your mood and energy after about 30 minutes. You'll get better results by taking the extract on an empty stomach, which significantly improves its absorption rate.

As an interesting side note, because of the way it increases blood flow into the whole pelvic region, it also has a positive stimulating effect on women.

Dr. David Williams